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Strategic Choices in Foreign Aid

by

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ABSTRACT

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This dissertation addresses three important questions surrounding the politics of foreign aid, namely what leads to its provisions by donor countries, and what are some of its consequences on those receiving it. Using arguments rooted in political economy models and large-N statistics, this dissertation provides three core findings: (i) Foreign aid can be driven by heterogenous motives in the donor country. (ii) This heterogeneity determines whether a donor lives up to the promises over foreign aid that it makes. (iii) Inflows of foreign aid tend to restrain the government's propensity to engage in killings.

Acknowledgments

It ought to be easily inferred from the title that this is a dissertation on foreign aid. About a dozen years ago, an extensive story in the German weekly *Die Zeit* told the story that foreign aid was set to increase again even though academics had not found evidence that decades of foreign aid had lead to improved lives in recipient countries. I have never gone back and reread the story, but it has certainly become my MacGuffin. Today, I am less baffled by this thanks to a number of brilliant scholars that I had yet not read back then. Yet, I suspect, the story from *Die Zeit* could be reprinted today in spite of efforts such as the Millennium Development Goals, billions in development aid, Bono, (RED), post-9/11 development concerns, etc. The hope is that this dissertation contributes just a tiny bit to a world in which the story could only be reprinted with, at least, minor modifications. Regardless of whether I succeed in this, many thanks are in order.

I could list examples of how Cliff Morgan helped, questioned, laughed at, and pushed me over the years, but it would not quite capture the depth of his impact and would only shortchange the gratitude that I mean to express. *In lieu*, with deepest sincerity and gratefulness: Thank you, Cliff. I may have acquired some of the academic formal credentials, but it remains your call whether I'm "Dave Brubeck."

Pretty quickly after entering Rice, I began developing and consulting "my inner Ashley Leeds." For everything that I wrote, I would ask myself what Ashley would say, what her next question would be, and so on. Even after such an exercise, her

actual comments on my papers and presentations made each strictly better.

Looking at acknowledgments in dissertations by Rice alumni, one ought to conclude that Randy Stevenson is really smart and really helpful. Well, these acknowledgments happily second this. Springsteen sang that, "we learned more from a three-minute record than we ever learned in school;" a few minutes of Randy's attention are the most valuable few minutes available at Rice.

There are many more facets to research and the world of political science than the bare arguments; Songying Fang and Bill Reed were invaluable in me learning about them. In my second semester, Bill stressed that we graduate students need to publish soon; I laughed then and now preach the same. Songying once told me that a draft of my paper was going to be ignored by everyone because it did not look mature as the proportioning of content was off; now I obsess over pacing, spacing, and proportioning of papers.

Dear Yoshi: How many times you told me I made no sense and how many times did I ignore your advice, only to figure out, that we were both wrong, yet, at times, a little less wrong than before? When my academic life was on the line, you helped save me even though I ignored your specific advice again. For those and countless other occasions, thank you! I'm sure I'm owed a round of sushi ...

Carla Martinez Machain- I thank you for being my lil' sister and for everything that comes with that relationship, from pretentiously swirling wine to raising questions that are far too inappropriate for this document, from complaining about anything to, perhaps, causing a recruit not coming to Rice. Needless to say, you're awesome.

Jaime Acosta, Daina Chiba, Matt Loftis, Naoko Matsumura, Steffi Russell-Egbert, and Dan Zaccariello: To whomever emails me first with the word "Bräustüberl" in the subject line, I owe a lavish dinner. Thanks for all the happy times.

Stefan Scholz, Alex Heppt, and Stefan Bierling were all very important for getting me interested in politics in the first place, albeit for very different reasons. The countless, passionate debates that ensued in the wake of 9/11 with Alex and Stefan may have annoyed many people who just sought the calmness of the saunas in Bad Wiessee and Erding, but they also convinced me that I want to understand international relations. Professor Bierling's passion and love for intellectual pursuit and scholarship has been infectious, and I certainly caught that bug.

My loving and fantastic parents, Helmut and Beate Heinrich, were supportive of any step I took or did not take, some of which were wise, others certainly not. I am grateful for literally everything that they have done for me, and this dissertation shall be dedicated to them. Thank you.

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Chapter 1

Introduction

At a first glance, foreign aid appears to be a weird policy. If one reads a politician's remarks on any prominent policy, such as education, taxes, or immigration, then the virtues of the proposal are touted with respect to (prospective) voters' improvement in well-being. A crude, knee-jerk analysis would posit that these voters appreciate these policies and would therefore reward the politician with a vote, bribe, or campaign contribution. It should be readily apparent how foreign aid differs as its benefits to people literally elsewhere are praised by the politician. This raises the question of whether aid is just different from everything else or whether that knee-jerk analysis is just fundamentally off the mark. This dissertation sides with the latter, and investigates how aid functions from a general perspective of political policies. What makes the analysis of foreign aid from this angle a fascinating intellectual endeavor is precisely the fact that the former perspective carries so much appeal among people, politicians, as well as scholars.

Studying foreign aid is not only worthy of an intellectual endeavor, but also carries dramatic real-life importance as the stakes are high. Despite the stunning gains

in human welfare in some places of the world, many places have failed to improve people's lives (e.g. Collier 2007, Clark 2008, Acemoglu & Robinson 2012). Richer states, celebrities, international organizations, and thousands non-governmental organizations respond to this rich-poor disparity by devoting considerable money and time to seemingly address the poverty. Therefore, the importance of foreign aid comes not only from the obvious first-order concern about human suffering, but also from the second-order opportunity costs from those seeking to solve the first-order problems.[1]

Systematic international efforts to address the lack of development have been around for decades now, but their track record is far from stellar. While some question whether foreign aid can succeed in helping development (Bauer 1984), the evidence for consistent improvement in lives of people is mixed at best (Rajan & Subramanian 2008, Doucouliagos & Paldam 2009, Easterly 2009).

The unsatisfactory effectiveness of foreign aid should lead to one of two things. Foreign aid could be abandoned, and the resources should be focuses on policies that appear more promising. For example, Clemens (2011) suggests that more lenient immigration policies by rich states should entail economic gains for the poor that exceed by leaps and bounds any gains that foreign aid could bring about. Alterna-

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[1] Consider whether the poor of the world are better off by Bill Gates spending his wealth as a philanthropist or as a businessman and investor. I believe the answer is far from obvious.

tively, the current practice of foreign aid could be reformed. The first option seems highly doubtful to be viable in the short run.

In order for reforms to aid to have the chance to actually achieve something, the workings of current aid need to be understood thoroughly. After all, this is far from straightforward. Let me illustrate this by contrasting the practice of foreign aid with an everyday action such as the purchase of some good at a store.

The steps involved in an everyday purchase are well-known. You enter the store, roam around, grab an item that strikes your interest, perhaps read up online reviews on it, proceed to the checkout, pay, and then go home and use the item. If the item turns out to be defective or is even just different from what was hoped for, the store will likely replace it.

Everything that makes this vendor-customer relationship so simple and efficient is absent when people's empathy for others' misery brings about foreign aid. It is difficult to judge whether a given aid package is working (Rajan & Subramanian 2008, Doucouliagos & Paldam 2009, Wright & Winters 2010), there is little immediate contact between those who support foreign aid, those that decide over its implementation, and those for whom it is ostensibly intended (Nielson & Tierney 2003, Easterly 2006, Easterly 2010), and there is sparse (yet increasing) information about the details of aid (Easterly & Williamson 2011).

Further, as passionate as people can get about certain items (such as exquisite food and electronic gadgets), emotions are stirred much more when confronted with the poverty elsewhere which aid aims to address (Singer 2009). Precisely because foreign aid is often appreciated due its titular and ostensible goals without supporters having a real stake in outcomes, people pay little attention to details. In contrast, the consumer usually watches carefully what he gets for his money.

As the stakes are high in terms of human well-being and spending of taxpayers' money, emotions are charged, and matters are massively more complicated than buying an everyday item, it behooves scholars to develop a deeper understanding of the inner workings of foreign aid. This dissertation seeks to contribute to this end.

Policies and Politics over Domestic Issues and Aid Policy

As illustrative as it is to compare buying some simple item with the superficial manifestations of foreign aid, I am setting up an easily combustable straw man; I am comparing a market transaction with a political outcome. A fairer and complementary comparison is between foreign aid and domestic politics. Let's return as a starting point to the crude, knee-jerk analysis from above.

A first stab at a closer comparison might to consider some examples of the rhetorical choices for aid and domestic policies. We might as well start with the onset of

modern foreign aid, namely when George C. Marshall spoke at Harvard University on June 5, 1947.[2] He spoke of the dreary postwar circumstances in Europe and how the United States could help. It was a necessity to do so, he opined. Aside from a vague reference to "the economy of the United States" of a weak postwar economy in Europe, the speech calls for assistance by the people of the United States to help the people of Europe. Helping them was tantamount to a moral imperative.

Things have not changed much. In the run-up to the 2012 U.S. presidential elections, the two main contenders, Barack Obama and Mitt Romney, gave speeches on development issues at the Clinton Global Initiative. Obama spoke of modern day slavery and the United States' duty to assist ridding the world of it. Romney spoke almost exclusively about how U.S. assistance could boost commerce in other countries and how that would benefit citizens.[3]

Just as Marshall's, needless to say that Obama's and Romney's speeches were not without some (thin) references to potential benefits to U.S. citizens. Romney spoke without further elaboration that assistance ought "to foster a substantial United States strategic interest, be it military, diplomatic, or economic" and that aid may

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[2] The text of the speech is available on the website of the OECD under `http://www.oecd.org/general/themarshallplanspeechatharvarduniversity5june1947.htm` [accessed February 11, 2013].

[3] Obama's and Romney's speeches are available at `http://www.politico.com/news/stories/0912/81655.html` and `http://blogs.wsj.com/washwire/2012/09/25/text-of-romneys-address-to-clinton-global-initiative/`, respectively.

open doors for U.S. businesses. However, these references were short.

In this light, consider how the same politicians consistently and lavishly praise their domestic policies' effects for their voters. Romney promised in his acceptance speech at the Republican National Convention expanded options for education for children, new trade agreements which he "will make work for America," not to raise taxes on middle class citizens, and to cut taxes on U.S. businesses so that they can be "America's engine of job growth."[4] In his acceptance speech, Obama said that he, as the president, "took on [an education] system that wasted billions of taxpayer dollars on banks and lenders" so that tuition was lower now, and he planned on reducing carbon emissions as they were connected to floods and draughts, which threatened children's future.[5]

Taking the two politicians' at face value, then aid is supposed to benefit citizens of recipient countries, none of whom can vote. Yet every other policy is supposed to benefit voters. Interestingly, this dualism is echoed in the scholarly work on foreign aid on one side, and on domestic politics on the other. For instance, some examples of scholarly work on the latter find that politicians exert a lot of effort to stay in power (Bueno de Mesquita, Smith, Siverson & Morrow 2003*a*), redistribute money

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[4] See http://www.huffingtonpost.com/2012/08/30/mitt-romney-speech-text_n_1826619.html.

[5] See http://www.huffingtonpost.com/2012/09/06/barack-obama-speech-text-_n_1849133.html.

to their constituents (Bickers & Stein 2000), use declarations of natural disasters as electoral instruments (Reeves 2011, Bechtel & Hainmueller 2011), invoke rhetoric fitting the constituents, respond to public opinion (Lax & Phillips 2009), claim credit for appropriated projects (Mayhew 2004, Grimmer, Messing & Westwood 2012), and so forth. While obviously not exhaustive, sheer benevolence, as present in the rhetoric on foreign aid, appears to be as uncommon in the scholarly literature as in the rhetoric on these policies.

In contrast, countless works on foreign aid speak of particular "biases" of donors; that is, donors might bias aid allocations away from development-oriented patterns. For instance, voting patterns in the United Nations (UN) between the recipient and donor and the recipient's presence on the UN Security Council have been shown to generate more aid outlays (Alesina & Dollar 2000, Kuziemko & Werker 2006). Each set of authors laments, probably justifiably, that these aspects have little to do with the development impetus which aid ostensibly serves. Even in late 2012, an American Economic Review article could express an understated astonishment that donors would disregard development concerns and increase aid for friendly regimes in election times (Faye & Niehaus 2012).

A presumed dualism is always curious, perhaps unsettling, in absence of a good justification for it. Scholars in the political economy vein do not presuppose such

divergent assumptions, but assume that politicians act the same regardless if the policy in question is about taxes, defense, health, or foreign aid. As a matter of fact, this literature takes as a starting point what Marshall castigates as offensive to the noble undertaking by the United States. He warned that "[...] governments, political parties, or groups which seek to perpetuate human misery in order to profit therefrom politically or otherwise will encounter the opposition of the United States."

Political economy work does not suggest that donors seek to "perpetuate human misery" in recipient countries,[6] but it seeks to understand policies by assuming that human misery is something from which actors can benefit. For instance, Powers, Leblang & Tierney (2010) demonstrate that legislators are more likely to vote for the expansion of aid if their districts gets more aid contracts. Relatedly, Milner & Tingley (2010) find that, since aid is a giving away of capital, owners of capital stand to gain the most from aid, and therefore legislators, whose constituents have capital abundance, are more likely to vote for aid. In Marshall's eyes, such legislators should "encounter the opposition of the United States."

Other studies show that, what others see as "biases" in aid allocation patterns, such as being on the UN Security Council, are actually optimal features once we consider foreign aid to be a tool to politicians' ends (Bueno de Mesquita & Smith

[6] An exception might be Bueno de Mesquita & Downs (2006) who argue and show that Western countries have an incentive to keep other countries' institutions minimal. In turn, this affects the effectiveness of development aid of these Western countries (Wright 2010).

2009*a*). For instance, Eisensee & Strömberg (2007) show that the United States only provides assistance for disasters if there is news coverage. The real suffering after disaster matters only if it is on the reel and thus can honored by voters. Similarly, different ideologies of incumbent parties affect the government's aid volume(Tingley 2010, Goldstein & Moss 2005). If aid was truly congruent with politicians' rhetoric about it, then none of these just-mentioned features should be present.

Plan of Dissertation

This dissertation follows the political economy notion to study what actors do and not what they say in order to understand the workings of a phenomenon.[7] It builds rigorously from assumptions about answers to the *cui bono* question asked with respect to foreign aid. Unsurprisingly from the standpoint of the bigger work in political economy, the benefactors are the decision-makers' constituents.

In Chapter 2, *When Is Foreign Aid Selfish, When Is It Selfless?*, I attempt to reconcile the long-running debate over whether giving foreign aid is indeed a selfish or selfless task by donor governments. Assuming that decision-makers are just interested in satisfying the public, I show that foreign aid can be driven by either impetus.

[7] A note on the separate chapters is in order. Chapter 2, *When Is Foreign Aid Selfish, When Is It Selfless?*, is a minimally modified version of an article that is bound to appear in 2013 in The Journal of Politics. For future versions of the other two substantive chapters, consult the author's website under `www.theinrich.net`.

Foreign aid is driven by selfish motives when the recipient country has a policy under its control that is of interest to the donor leader's constituents. Likewise, if those constituents learn about misery elsewhere, then it is indeed in the decision-maker's interest to also give aid. Whereas the former logic is at the heart of Bueno de Mesquita & Smith (2009*a*), who forcefully argue that aid is exclusively a selfish endeavor, the model in Chapter 2 shows that it need not be and that it is a special case of how societal interests can affect foreign aid.

Even though I argue above to study what actors do and not what they say, the divergence of deeds and words can be salient as well. One particular case is the often-observed failure by donors to deliver on foreign aid pledges. Previously, scholars have argued that such shortfall is detrimental to the efforts of recipient governments to spur economic growth (Lensink & Morrissey 2000). Chapter 3 explores the *Strategic Reneging on Foreign Aid Promises* which, as I will argue, lies at the heart of the issue. Building on the theoretical insights of Chapter 2, I show that these heterogeneous motives (selfish, selfless) lead to very different predictions about whether a donor honors its commitments on foreign aid. The more aid serves to influence policies under the control of the recipient, the more the donor has incentives to do as promised. However, when aid was promised to help out those in misery, say, after a disaster, the donor leader can exploit the quickly fading attention by the news media

and thereby the citizens. As pledges get televised, but the minutiae of the delivery do not, a donor leader has incentives to renege on promises.

The first two substantive chapters are concerned with what gives rise to foreign aid. In *Does Foreign Aid Cause Governmental Killings?*, I consider one particularly salient consequence of foreign aid. Models of political economy have long explored numerous political effects from aid, such as corruption, political entrenchment of elites, etc. Interestingly, similar thinking leads to the prediction that foreign aid should impel governments to kill people or remove them from political life (Esteban, Morelli & Rohner 2010, Besley & Persson 2011). Using powerful statistical model from the machine learning literature to deal with issues of confoundedness (Chipman, George & McCulloch 2010), I estimate actually a negative causal effect of foreign aid on the recipient government's propensity to engage in killings. While surprising, in light of the greater body of work on the relationship between governmental resources and violence, this estimate should not be taken as the last word on the topic.

This dissertation will proceed as follows. Each of the three substantive chapter will appear in turn. As this dissertation is composed of separate, self-contained substantive chapters, a certain redundancy in arguments and details of measures could not be avoided. At the very end, a conclusion reflects on the findings of the dissertation and offers

Chapter 2

When Is Foreign Aid Selfish, When Is It Selfless?

2.1 Introduction

Why is foreign aid given?[1] Is its allocation driven by donor interests and does it merely act as a bribe? Or is it determined by donors' selflessness, concerns for global justice, and recipient needs? In spite of a large number of studies, decisive evidence for either view is still elusive.[2] In light of that, continuing to ask *whether* foreign aid is given for one or the other reason may not be very fruitful.

It stands to reason that, perhaps, *both* presumed motives are at play simulta-

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[1] Yoshi Kobayashi and Cliff Morgan were very generous with their time and thoughts on this chapter. Additionally comments were provided by Patrick Brandt, Songying Fang, Susan Hyde, Ashley Leeds, Matt Loftis, Carla Martinez Machain, Elena McLean, Jim Morrow, Laura Seelkopf, Bob Stein, Randy Stevenson, Mike Tierney, Rob Walker, Matt Winters, Dan Zaccariello, the editors of the JOP, and three anonymous reviewers as well as by participants at presentations at the Forschungskolloquium at the Universität Regensburg, 2012 Texas Triangle Conference, 2011 Midwest Political Science Association Meetings, 2011 European Political Science Association Meeting, 2010 Polmeth Summer Conference, and at various instances of Rice's IR Lunch. An online appendix is available at `http://journals.cambridge.org/jop`; the replication package can be found on the author's website at `www.theinrich.net` upon publication.

[2] Among many others, see Pilvin (1962), McKinley & Little (1979), Maizels & Nissanke (1984), Lumsdaine (1993), Hook, Taylor & Schraeder (1998), Alesina & Dollar (2000), Neumayer (2003), Berthélemy & Tichit (2004), Milner & Tingley (2010), and van der Veen (2011).

neously. This is possible as neither the selfish nor the selfless approach to foreign aid necessarily contradicts the other. I propose reframing the main question of this age-old debate by instead of asking *whether* aid is selfless or selfish, asking *when* it is either. To this end, I provide a formal model of foreign aid allocations in which selfish and selfess motives may at the same time affect the aid flows. Crucially, my modeling reveals under which circumstances aid is expected to be driven by either motive.

Following the formal model by Bueno de Mesquita & Smith (2009*a*), I model the leaders of the donor and recipient countries bargain over foreign aid in order to better satisfy their political support groups, the "winning coalitions." Both leaders' winning coalitions derive utility from domestic policies and from some policy that might be subjected to bargaining between the donor and the recipient. Additionally, the donor's winning coalition has a preference for its leader to distribute aid in a humanitarian way. Unlike domestic policies that are often readily observable (such as hospitals, tax levels, and roads), the donor's winning coalition is usually in the dark about foreign aid policies. In order for the humanitarian preferences to affect the leader's aid decisions, the winning coalition needs to know the extent to which the leader's efforts comport with its humanitarian ideals. I argue that news coverage about the recipient conditions the extent to which the winning coalition can evaluate

and thus credit the leader for helping out poorer countries. This, in turn, together with incentives to buy policy concessions from the recipient country jointly shapes the donor leader's optimal foreign aid allocation.

The theoretical model predicts distinct mechanisms behind any observed foreign aid allocation. First, foreign aid can be driven exclusively by media-induced awareness of conditions in the recipient country if policy concessions are of little interest to the donor. Second, when the donor values policy concessions from a recipient country, the two countries strike a deal and the observed amount of aid is determined through bargaining. Third, if a recipient country is in misery and the news covers it heavily, then the donor leader can reap image gains from being seen as acting in a humanitarian manner. Therefore, the leader provides even more aid than necessary to buy a policy concession. Fourth, if the donor has little interest in the recipient's policies and the leader can gain little from being seen helping it, then aid just drains governmental resources and therefore is not given.

These mechanisms correspond to familiar arguments in the aid literature. However and most importantly, my model also predicts *when* each of these mechanisms apply so that I can test *when* aid is selfless and when it is selfish. As commonly used statistical approaches fail for this sort of question, I turn to a variant of finite mixtures, namely the mixtures-of-experts, which lets me model when the separate

mechanisms apply (Frühwirth-Schnatter 2006, Imai & Tingley 2011). I use data on the foreign aid of seven OECD donors to 99 recipients, spanning the years 1995 through 2003, as well as an original dataset on news coverage of recipients in the donor countries. The statistical models provide evidence that donors tend to provide aid in a way that is consistent with my model: bargaining between the donor and the recipient becomes more likely when the recipient has policies that are of interest to the donor, and humanitarian-motivated aid is more likely to take place as news of and misery in a recipient country increase.

In the next section, I review the previous work on foreign aid allocation. Next, I introduce the theory by first laying out how people form opinions on policy on which they have weak factual knowledge, and by then stating the formal model. After deriving the predictions, I describe how I test my predictions using the mixture-of-experts model. The results and conclusions follow.

2.2 Why Give Foreign Aid?

The two central findings in the literature on foreign aid allocations are that more aid goes to recipients who have some "strategic importance" to the donor and to those states receiving greater news coverage in the donor country. Further, countless surveys show that citizens are supportive of humanitarian motivated aid giving, but

wary of aid given for strategic purposes.

It is by now accepted knowledge that donors provide more aid to countries that have some sort of "importance" to them even though the precise concepts vary. Bueno de Mesquita & Smith (2007, 2009), whose work serves as a basis for this paper, provide a deeper explanation of how these findings can be interpreted. They argue that donor and recipient leaders may collude to improve their chances to remain in office by engaging in an aid-for-policy deal. That perspective echoes Morgenthau (1962)'s adage that aid is little more than a bribe. Providing aid reduces what the donor leader can spend on domestic goods, but the gains from the obtained policy concessions can outweigh these losses. An analogous logic applies to the recipient leader who may benefit from the increase in resources from received aid, but has to move a policy away from the bliss point. The variables capturing the notions of strategic importance in older work are operationalizations of where the donor leader covets a change in policy.

The exclusive focus on aid-for-policy deals makes it difficult for the model to offer an interpretation of two other robust findings in the literature, namely that news coverage of and natural disasters in the recipient country are associated with substantially increased foreign aid (e.g. Payaslian 1996, Van Belle, Rioux & Potter 2004, Drury, Olson & Van Belle 2005, Strömberg 2007). First, the most obvious interpre-

tation may be to treat news coverage as a proxy for a donor's salience. However, in their model, saliency is over a policy concession (such as United Nations Security Council votes or domestic policies in a former colony). Such concessions should not become more valuable as news thereof increases. Second, sudden increases in aid after disasters pose another problem. The model by Bueno de Mesquita & Smith explains the bargaining outcomes through rather sluggish variables such as institutions, saliency for policy concesions, and governmental resources. Due to their slow movements, these variables are ill-suited to explain such rapid changes in aid.

How has previous literature explained such aid spikes? Lumsdaine (1993) argues that aid allocation is (also) driven by citizen's humanitarian concerns. He shows that citizens care about human suffering elsewhere and wish that their government helps out with aid. Such seemingly selfless preferences are found consistently in opinion surveys.[3] Lumsdaine goes on to provide evidence that these preferences are reflected in donors' actual aid allocations through two channels. First, governments require personnel comprised of college educated and idealistic people who also happen to be those that often support development aid. Second, various groups (churches, intellectuals) support development aid. Beyond these suggestions, Lumsdaine offers little to connect opinions and aid outcomes.

[3] See in particular surveys by the Chicago Council on Foreign Affairs (1975–1999) and by the Chicago Council on Global Affairs (2002). Similar results are found in Eurobarometer and OECD surveys (OECD 2003, Eurobarometer 2009); see Riddell (2007, Ch. 7) for an overview.

Douglas Van Belle and co-authors theorize more about this news-aid nexus (see in particular Van Belle, Rioux & Potter (2004)). In Van Belle's model, leaders devise policies such that they help their reelection. Part of citizens's decision is whether the leader deals effectively with foreign policy issues. The leader tasks the bureaucracy to carry out the implementation of an aid policy which is one part of the foreign policy dealings. As the public rarely gathers first-hand information about the rest of the world, the bureaucracy simply monitors the public's source of information and provides aid in proportion to the news coverage. This offers not only an explanation for the association between news coverage and increased aid, but for increases, even spikes, in aid in the wake of disasters (Drury, Olson & Van Belle 2005, Eisensee & Strömberg 2007, Potter & Van Belle 2009).

With the approaches by Bueno de Mesquita and Smith on one side, and by Van Belle and Lumsdaine on the other, the literature presents two separate views to explain these main empirical patterns. It is noteworthy that the models do not necessarily contradict each other and that each model's weakness could be ameliorated by considering the other's strengths. In the next section, I present such a theoretical model that builds on the strengths of the models by Bueno de Mesquita & Smith and by Van Belle. This new model can tell us not only about the amount of foreign aid, but also *when* an aid-for-policy impetus and when humanitarian concerns give

rise to foreign aid.

2.3 Bargained Aid and News Coverage

Before introducing the formal model, which builds on the work by Bueno de Mesquita & Smith (2009*a*) but also allows for citizens' humanitarian concerns to matter, I outline how I assume that citizens learn about their country's aid policies. This confronts the fact that people generally have little factual knowledge about politics, and likely even far less about aid.

I model the interaction between a donor and a recient leader who bargain over an aid-for-policy deal with the goal to improve their respective odds of staying in office. Each leader's survival is dependent upon on how much utility each can bestow upon their respective winning coalitions (Bueno de Mesquita, Smith, Siverson & Morrow 2003*b*). Shifting the focus to the donor for now, the donor leader's winning coalition receives two benefits from any aid allocation, namely the bought policy concession and the induced utility from helping others; I will call this latter part "warm glow" at times (Andreoni 1990). However, a lack of factual knowledge of aid hinders the straightforward evaluation of these benefits.

First, if aid buys a policy concession from the recipient country, then the winning coalition need not have factual knowledge of aid in order to experience utility from it.

For example, if a donor buys access to natural resources on behalf of its firms, then such firms might pay higher wages, employ more people, or give higher dividends. Even though it does not know that foreign aid cause the effects, the winning coalition appreciates a marginally improved economy. It gains utility from the effects of aid. Second, the utility from warm glow is quite different as no consequences of aid are experienced routinely; the effects play out elsewhere. Therefore, it is essential that the winning coalition learns about aid efforts in order to appreciate them. Unlike in the broader foreign policy (e.g. Rosenau 1961, Baum & Potter 2008) and political economy literatures (e.g. Majumdar, Mani & Mukand 2004, Mani & Mukand 2007, Prat & Strömberg 2011), this latter connection between policies and learning about them has been explored less in the foreign aid literature (see for a notable exception Milner 2006). Therefore, a more thorough discussion is merited.

Zaller's work on survey responses and mass political opinion provides a theory that allows me to connect the assumption that people have a preference over aid for humanitarian purposes, the volume of news, and the mechanism by which aid efforts affect the survival of the incumbent (Zaller & Feldman 1992, Zaller 1996). The core of the argument is simple: When people evaluate an issue about which they have weak factual information, such as foreign aid, they take a random draw from remembered messages about the issue. The primary source of these messages is

the news media, as many scholars including Zaller point out (e.g. Lodge, Steenbergen & Brau 1995, Delli Carpini 2000, Baum & Potter 2008). As the volume of available news rises for a particular country, people should receive more information connecting the country's poverty and the extent of the foreign aid efforts. Zaller argues that citizens store such messages and draw from them when it is time to evaluate how humanitarian the donor leader's aid policies were. It is import to note the interactive effects between news volume, a recipient's misery, and foreign aid reinforce each other. For example, assume there are two countries with equal levels of misery and receiving the same foreign aid. Aid to the one with the higher news coverage contributes more to the winning coalition's utility. Having specified the connection between largely unobserved aid policies, citizens' preferences, and the evaluation of the leader, we can now turn to the formal model which incorporates this as well as the aid-for-policy causal mechanisms.

2.3.1 The Model

The foundation of the model is the aid-for-policy game by Bueno de Mesquita & Smith (2009*a*). The model is a game between the leaders of the donor and recipient countries as well as their respective winning coalitions. Denote the donor and recipient countries as A and B, and their leaders as AL and BL, respectively. Each

countries' leader needs to ensure the support of his winning coalition in order to hold onto office. As leaders solely derive utility if they are in office, they focus on the winning coalition's utility from enacted policies. The recipient and donor winning coalitions each care about three things: domestic public and private goods, the valence for the leader, and the status of one particular policy. In addition, the donor's winning coalition cares about the warm glow from its country's aid allocation.[4] This last component is a novel extension that captures the humanitarian motives behind aid (Lumsdaine 1993, Singer 2009).

First, each winning coalition gains utility from domestic public (g) and private (z) goods provided by the respective leaders (Bueno de Mesquita et al. 2003*b*). Private goods are targeted to particular individuals, such as bribes, whereas public goods are untargeted and assumed to benefit all people (e.g. schools, hospitals). The utility of any goods bundle is $U(g, z) = v(g) + u(z) = \sqrt{g} + \sqrt{z}$. There are fixed resources (R) available which impose a budget constraint, $pg + Wz \leq R$, where p is the price for public goods and the size of the winning coalition (W) acts as the implicit price of the private goods. Second, the winning coalition also has some valence for the leader which is independent of all other sources of utility. One may think of special ethnic ties, for example. The winning coalition knows and the leader is uncertain about

[4] By design, these four components of utility are non-overlapping such that foreign aid can be studied more closely.

this valence. It is left unmodeled and is represented as a random variable θ which has full support and a cumulative distribution, $F(X)$.

Third, the winning coalition receives utility from the policy over which the two leaders bargain. The policy is under BL's control and takes on one of two values, $y \in \{0, 1\}$. The model treats the particular policy as if it were a public good (or bad) for the countries in the sense that all people enjoy it. The winning coalition of the donor most prefers y to be 1, but incurs σ_A in disutility if $y = 0$; B's coalition would like to see it at 0, but incurs disutility of σ_B if $y = 1$.

Fourth, and this applies only to the donor, the winning coalition cares about how humanitarian the aid allocation to B is. This is novel over the original aid-for-policy formulation by Bueno de Mesquita & Smith. I assume that all people receive utility when their country helps those in misery elsewhere. This humanitarian preference, a recipient's poverty, and news coverage enter the utility function in an interactive way consistent with the theoretical arguments from above: $h(n, d)f(r)$, where n denotes the amount of news coverage of B, d the level of misery in B, and r is the amount of aid given to B. The function $h(\cdot)$ maps the news coverage and the recipient's poverty into people's humanitarian attribution, and $f(\cdot)$ models the diminishing humanitarian utility from increasing aid.[5] For example, aid to a country results

[5] The partial first derivatives of $h(n, d)$ with respect to n and d as well as the cross-partial derivaties are all (weakly) positive. Also: $h(n = 0, d) = h(n, d = 0) = 0$.

in more utility for the winning coalition as news coverage and misery individually increase.

These components make up the utility for the winning coalition of each leader. The winning coalitions compare the total utility from keeping the leader to the utility that a challenger could provide, which is denoted as Q. If Q is greater than the utility from the incumbent leader's policy choices, then the winning coalition will remove the leader. This completes the specification of the utilities of the players. As in Bueno de Mesquita & Smith (2009*a*), the sequence of moves is as follows: First, AL proposes an aid-for-policy deal (r, y) where r is the offered amount of aid. Then BL decides whether to accept it. If accepted, r is transferred and y is set to the proposed value. If rejected, no resources are transferred and BL sets y at the bliss point. Last, AL and BL face domestic reselection.

2.3.2 Equilibrium

I will provide here the intuition of the subgame perfect equilibrium and relegate details to Section A of the online appendix. The interaction of the two leaders involving foreign aid has three effects for the utility of the donor's winning coalition. First, giving foreign aid tightens the donor's budget so that the leader can provide fewer goods to the winning coalition; that is, g and z decline. Second, if enough aid

is given that BL agrees to change the policy, then utility marginally improves from $-\sigma_A$ to 0. Third, aid induces utility from warm glow ($h(n,d)f(r)$). The changes in utility for the recipient leader's winning coalition from receiving aid are analogous but without the experience of warm glow. Any incoming aid increases the budget and thus the domestic goods provisions and, if an aid-for-policy deal occurs, then the utility for the winning coalition falls by σ_B.

Working backwards, the recipient leader will accept any deal that does not ask him to change policy as any aid is better than no aid. If the donor proposes a policy change, then the recipient can use the boosted budget to provide more domestic policies. He needs this to offset the disutility that the policy change causes. This introduces a minimum price $\underline{r}$ which is the amount of aid that makes the recipient leader indifferent between accepting and rejecting a proposal to change policy. This minimum price is a function of the rate at which greater resources let BL increase his domestic policies as well as the recipient winning coalition's valuation has for the policy.

The donor leader will pick the combination of r and y that maximizes his winning coalition's utility. For ease of interpretability, I will graph the winning coalition's utility for any (r, y) minus its utility from not engaging in foreign aid activities at all, which I denote as $\Delta(r, y)$. The optimal choice for the leader depends on the

minimum price for a policy concession ($\underline{r}$), the increase in Δ from obtaining the policy concession, how cheaply the donor can give up resources as foreign aid, and how much warm glow aid generates for the donor's winning coalition. Therefore, depending on the parameters of a particular case, the optimal amount of aid can lie in four different regions, namely at $r = 0$, in $r < \underline{r}$, at $r = \underline{r}$, or in $r > \underline{r}$.

These cases of where r lies, and the causal mechanisms that they suggest, are best demonstrated visually. In Figure 2.1, each panel depicts an example for the four possible cases of where the optimal r lies. In each panel, the abscissa gives amounts of aid and the ordinate shows $\Delta(r, y)$. The dashed line plots $\Delta(r, y = 0)$, that is the winning coalition's utility improvement over not giving any aid when the leader offers r but does not ask BL to change y. Similarly, the solid line depicts $\Delta(r, y = 1)$, which assumes that the donor leader asks for the policy change. The dots indicate the maximum $\Delta(r, y)$ that can be achieved. Let's go through the cases one by one as they give rise to the main predictions.

On the far left in Figure 2.1, there is the *zero-aid case* in which no aid is given and BL will not change its policy. No matter what the proposed combination of aid and policy is, $\Delta(r, y)$ is less than or equal to zero such that any amount of aid would not increase the utility of the donor leader's winning coalitions. This is the case in which the purchase of a policy concession requires that the donor leader to reduce

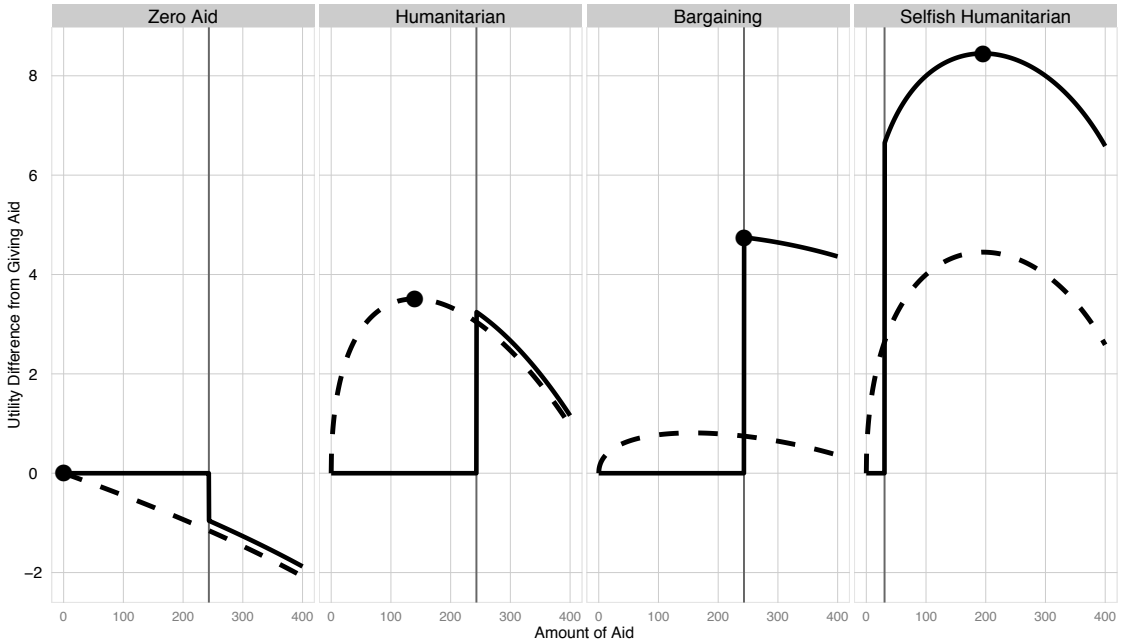

Figure 2.1 : **Aid-for-Policy Deals and AL's Utility.** The abscissa depicts the possible amounts of aid. The ordinate shows the difference in the donor's winning coalition's utility from proposed aid-for-policy deals over not giving any aid at all. Formally, it is $\Delta(r, y)$=$V^*(R_A - r, W_A) + h(n, d)f(r) - \sigma_A(1-y) - V^*(R_A, W_A) + \sigma_A$. The dashed line shows $\Delta(r, y = 0)$, the solid line $\Delta(r, y = 1)$. The thin vertical line gives BL's minimum price for a policy concession, $\underline{r}$. The dots denote the highest utility that leader can confer to his winning coalition in each panel. The following parameter values were chosen for each panel. *Zero Aid* Case: $\sigma_A = 0.2$, $h(n, d) = 0$, $R_A = 700$, $R_B = 250$, $W_A = 600$, $W_B = 200$, $p_A = p_B = 20$, $\sigma_B = 1.5$. *Humanitarian* Case: $\sigma_A = 0.2$, $h(n, d) = 0.56$, $R_A = 700$, $R_B = 250$, $W_A = 600$, $W_B = 200$, $p_A = 0.79$, $p_B = 20$, $\sigma_B = 1.5$. *Bargaining* Case: $\sigma_A = 4$, $h(n, d) = 0.3$, $R_A = 700$, $R_B = 250$, $W_A = 600$, $W_B = 200$, $p_A = p_B = 20$, $\sigma_B = 1.5$. *Selfish Humanitarian* Case: $\sigma_A = 4$, $h(n, d) = 0.56$, $R_A = 500$, $R_B = 250$, $W_A = 600$, $W_B = 200$, $p_A = 2$, $p_B = 20$, $\sigma_B = 0.22$.

domestic policies too much, and there is too little warm glow that can be generated. Therefore AL prefers not to give any aid. (Equivalently, AL could propose a policy change and offer less than $\underline{r}$, which BL will subsequently reject.)

On the near left, the *humanitarian case* is shown. The donor leader does not buy a policy concession from the recipient as it has either a low saliecy for his winning coalition (low σ_A), is too expensive in terms of foregone domestic goods, or the minimum price ($\underline{r}$) is too high. The donor leader would not propose a policy change, as for low amounts of aid it would be rejected and the leader provides zero utility improvement for his winning coalition; for aid greater than or equal to than $\underline{r}$, the foregone domestic goods are too costly for the donor leader. Therefore, the donor leader simply piggybacks on the moderate news coverage and the recipient's misery and provides some aid without seeking a policy change. Thereby, he still improves his humanitarian image over not spending any aid at all. Therefore, the optimal amount of aid is determined by the news coverage, the recipient's state of poverty, and of the costs for giving up resources as aid. Since gains in humanitarian image are driving the aid allocation, the variables affecting a bargained amount of aid do not matter for the actually observed amount of aid. This corresponds to the situation described by Lumsdaine and Van Belle.

On the near right, the donor's costs to transfer resources from domestic goods

to aid is cheaper or the saliency for the policy is higher than in the previous case. Therefore in this *bargaining case*, the donor leader asks for a policy concession and pays exactly its minimum price, $r = \underline{r}$. This corresponds to a version of the game in Bueno de Mesquita & Smith (2009*a*) as well as to Morgenthau's view where aid acts solely as a bribe. The actually transferred amount of aid is then a function of the factors that determine the bargaining over the policy concession (ie. the σ, W, and R for each A and B). Since the two states are bargaining, the optimal aid allocation is unaffected by how much humanitarian benefit the donor leader can reap. That is, the amount of aid is independent of both news coverage and the recipient's misery.

On the far right, the *selfish humanitarian case* is like the *humanitarian case* except that the misery and news coverage of the recipient are so large that they push the optimal amount of aid beyond $\underline{r}$. In this case, the leader can also ask for a policy change and will get it and thereby boost his winning coalition's utility by σ_A. When the *selfish humanitarian case* characterizes aid, then none of the variables that determine the minimum price of the policy concession matter for the actual aid allocation. Instead, the amount of aid is determined by the recipient's poverty and the donor leader's ability to spend resources on aid. These are the same as in *humanitarian* case.

Even though the model is close to the one in Bueno de Mesquita & Smith (2009*a*),

it sheds light on many novel aspects of foreign aid. Most importantly, the four cases that characterize actual aid allocations occur under identifiable conditions. Therefore, I also obtain predictions about *when* bargaining and humanitarian motives are the crucial determinants for the amount of aid and thereby when aid is selfish and when it is selfless. My model predicts that the variables associated with the two *humanitarian* cases are more likely to matter for the actually observed aid as the news coverage and the recipient's misery increase, and those from the *bargaining* case as the donor's saliency in the recipient's policies increases. Specifically, I will test the following:

- As news coverage, recipient's misery, and the donor's saliency each increase, a recipient is more likely to receive any aid, ie. the *zero-aid* case is less likely to apply.

- As news coverage and recipient's misery each increases, the *humanitarian* and the *selfish humanitarian* cases become more likely to characterize the actual aid allocation.

- As the donor's saliency increases, the *bargaining case* becomes more likely to characterize the actual aid allocation.

2.4 Empirical Analysis

My empirical analysis proceeds in three steps. First, I will test whether the donor's saliency, news coverage, and the misery variables make it more likely that a donor gives any aid at all. This assesses whether the *zero-aid* case is distinguishable from the *bargaining* and *humanitarian* cases. Second and most importantly, I will estimate a statistical model that lets me study *when* states *bargain* over aid and when donor leaders cater to their winning coalitions' *humanitarian* interests. Last, I will test whether my statistical models fit the data better than competitor models.

Unfortunately, as data on the policy concessions are unavailable, I will not be able to distinguish between the the *humanitarian* and *selfish humanitarian* cases in my statistical models. Their maximizing amount of aid is determined in the same way by the news coverage, the recipient's poverty, and the donor's cost of giving up resources for aid. Therefore, I have to collapse the *humanitarian* and *selfish humanitarian* cases into one category for the empirical analysis which I call the *humanitarian case*.

2.4.1 Statistical Models

I am running two different statistical tests, one to determine whether the *zero-aid* or any of the other two applies and another to test under which circumstances *bar-*

gaining or *humanitarian* incentives drive the actual aid allocation. The first test is straightforward, using a simple probit to assess whether news coverage, recipient's misery, and the measures for the donor's saliency for policy concessions increase the probability of getting any aid. The second test is more difficult and merits discussion.

How can we model statistically *when* each of the theoretical cases applies to a particular observation? The statistical approach not only needs to explains variation in foreign aid by different sets of covariates, which I shall call "components," but also how covariates affect the probability of each of the two covariate sets doing the best job explaining aid. To this end, I use a finite mixture model in which the applicability of the two components is modeled through data as well. This model is known as a mixtures-of-experts.

Let's develop the mixtures-of-experts model by starting with the likelihood of the observed foreign aid. Let it be captured by the variable y_{it} where i denotes the donor-recipient pair and t the year of the observation. The *humanitarian* and *bargaining* cases are modeled as a function of covariates and their coefficients, $\mathbf{x}_{it}^{(k)}$ and β_k for $k \in \{h, b\}$, and common variables $\mathbf{m}_{it}$ with coefficient vector γ. I assume that y_{it} has one of two Gaussian densities (p_N), which are the mixture components, with parameters relating to the *bargaining* case (b) or to the *humanitarian* case (h): $p\left(y_{it}|s_{it}, \cdot\right) = \prod_{k\in\{b,h\}} p_N\left(y_{it}|\mathbf{m}_{it}\gamma + \mathbf{x}_{it}^{(k)}\beta_k, \sigma_k^2\right)^{I(s_{it}=k)}$. This expression is the

complete-data likelihood and requires knowledge of s_{it}, which is a categorical variable which indicates to which mixture component observation y_{it} belongs. Obviously, this variable unobservable. For now, suppose we knew s_{it}, then we can easily model this via, say, a Bernoulli-logistic model. Let this prior probability that an observation belongs to mixture component h be, $Pr\left(s_{it}=h\right)=1-Pr\left(s_{it}=b\right)=\frac{1}{1+exp(-\mathbf{z}_{it}\delta)}$. Notice that δ tells us how variables affect whether *bargaining* or *humanitarian*-motivated aid become more likely and is therefore the main object of interest for the statistical tests.[6]

How can can deal with the missing s_{it}?. It is standard in the mixture literature to recover it as part of the estimation by simply classifying each observation y_{it} in proportion to its relative marginal likelihood as either $s_{it}=h$ or $s_{it}=b$ (Frühwirth-Schnatter 2006). This turns out to be proportional to the kernel of a Bernoulli density so that the probabilistic recovery of s_{it} is trivial. I use an EM algorithm to fit the model, relying on the *flexmix* implementation in *R* (Grün & Leisch 2007). In Section C of the online appendix, I carry out checks on identifiability of the model as advocated by Grün & Leisch (2012). My main conclusions are unaffected by such possible issues.

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[6] See Frühwirth-Schnatter (2006) as an introduction to mixture modeling in general and Imai & Tingley (2011) as a rare applications in political science.

2.4.2 Data & Operationalizations

I construct both statistical models (probit, mixtures-of-experts) by tying them closely to my theoretical model in terms of their structure and the included covariates. As a consequence, the often-used rationale for control variables is at odds with this goal. Variables that are not reconciled within the theoretical model should be left out. For example, many studies on foreign aid allocations use a lagged dependent variable, either for explicit theoretical reasons (e.g. Carey 2007) or to account for serial correlation. My theoretical model assumes that aid is announced and negotiated in every period anew so that last period's aid allocation does not matter for this period's; hence I construct my statistical model assuming the same. Of course, that need not be assumed theoretically but doing so gives a different theory that competes with my model. As comparing models cannot be done by simply including the opposing theory's (or theories') variables, we need to rely on comparative model testing statistics (Clarke 2001, Clarke & Primo 2012). I offer a few such comparisons between my model and models inspired by Bueno de Mesquita & Smith's as well as by Lumsdaine and Van Belle's works. Obviously, more such comparisons are encouraged but are beyond the scope of the present paper.

The donor saliency variable captures how much the donor's winning coalition cares about a policy concession from the recipient country. I rely on four commonly

used measures. First, policies in former colonies play a significant role in donors' domestic politics. For example, France cares that its culture and language are carried on in former colonies, which it ensures by extending aid to recipient governments (Schraeder 1995, Hook, Taylor & Schraeder 1998). Such aid may make politicians more likely to push schools to teach French instead of English as a foreign language, for example. The variable comes from the ICOW Project (Hensel 2006). Second, interest in policies elsewhere tends to wane with distance (Schumpeter 1942). I measure distance by (the logarithm of) the capital-to-capital distance (Gleditsch & Ward 2001). Third, policy concessions from more populous countries should factor more heavily as their effects should be more momentous. Data comes from Penn World Tables. Fourth, if the recipient enters the United Nations Security Council (UNSC), it can sell its vote to other states, a practice for which there is systematic evidence (e.g. Kuziemko & Werker 2006). I use data by Dreher, Sturm & Vreeland (2009).

News coverage plays a crucial role in the theoretical model. I collected original data from the online archives of the print editions of a single major newspaper for each donor country. Using the *Toronto Star* (Canada), *Süddeutsche Zeitung* (Germany), *Irish Times* (Ireland), *Corriere della Sera* (Italy), *El Pais* (Spain), *Neue Zürcher Zeitung* (Switzerland), *The Guardian* (United Kingdom), and the *New York Times*

(United States of America) each, I obtained counts for each newspaper of the number of articles that mention each recipient. The variable is standardized by each donor to account for heterogeneity due to general news volume, linguistic uniquenesses, and the particular policies by newspapers. The variable $News_{it}$ is then the news volume in year t in the donor country about the recipient which make up dyad i. Section D in the online appendix has several validity checks for my data collection.

I capture the recipient's misery with three variables. First, I use the gross domestic product per capita of the country (Gleditsch 2002) as a broad measure of general human welfare. Second, I measure the extent of disasters by the number of people affected by droughts, floods, volcanos, and earthquakes (CRED 2011). This corresponds to opinion surveys that show that people in donor countries support aid for disaster-struck countries. The third measure of misery is a dummy for Sub-Saharan African countries. This is inspired again by how surveys frame the concept of compassion with human suffering.

A few further variables need to be operationalized that are part of the theory, but not of explicit hypotheses. Data on the sizes of the countries' winning coalitions is calculated from Norris (2008) using the definition in Bueno de Mesquita et al. (2003*b*). The variables' levels are dummied apart in the analysis. The governmental resource data come from Heston, Summers & Aten (2011), and are the product of

the country's population, GDP-per-capita, and the government's share of GDP.

These variables are used throughout my analysis. The variables for saliency, news, and a recpient's poverty enter the probit simply linearly and additively. However, for the mixture-of-experts, the use of the variables requires more care as it needs to comport with the setup of the theoretical model. First, the variables in $\mathbf{x}_{it}^{(h)}$ explain the *humanitarian* case and feature an intercept, news coverage, all the variables measuring the recipient's poverty, and interactions between news and the poverty variables. Second, an intercept, all saliency measures, and dummies for the recipient's size of the winning coalition enter $\mathbf{x}_{it}^{(b)}$.[7] Third, in $\mathbf{m}_{it}$, I account for the unobserved heterogeneity that is introduced in my theoretical model through the valence term, θ. Foremost, I include a trend for all observations by using a third-order polynomial of time. In some specifications, I include dummies for either each donor (with the United States as the excluded category) or for each recipient region.

Last and most importantly, there are also variables that help explain *when* each of the cases apply. This hierarchical part of the mixtures-of-experts is modeled through variables in $\mathbf{z}_{it}$. The theoretical model suggests that donor saliency, news coverage, and misery drive which condition best explains the actually observed amount of aid. A summary of the use of variables is provided in Table 2.1.

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[7] The donor's winning coalition size also matters, but there is no variation in it in my sample.

$\mathbf{x}_{it}^{(h)}$	Intercept, news coverage (logged), total number of people affected by disaster (logged), recipient's GDP-per-capita (logged), dummy for Sub-Saharan Africa, and interactions between the news and all other variables.
$\mathbf{x}_{it}^{(b)}$	Intercept, colony dummy, geographic distance (logged), recipient's population (logged), dummy for UNSC membership, resource of the recipient (logged), dummies for each level of the recipient's winning coalition size
$\mathbf{m}_{it}$	Polynomial of the third order of time, donor government resources (logged)
$\mathbf{z}_{it}$	Intercept, colony dummy, recipient's population (logged), dummy for UNSC membership, geographic distance (logged), news coverage (logged), total number of people affected by disaster (logged), recipient's GDP-per-capita (logged), dummy for Sub-Saharan Africa

Table 2.1 : **Overview of Covariates in the Mixture-of-Experts Model.** In some specifications, $\mathbf{m}_{it}$ includes donor-specific or recipient-region fixed effects.

Finally, aid for each of the donors in the data comes from the OECD Development Assistance Committee. I use aid commitments from each donor to each recipient in each year in constant dollars. The data set consists of eight donors (Canada, Germany, Ireland, Italy, Spain, Switzerland, United Kingdom, United States) and 99 recipients, which are listed in Section B of the online appendix. This makes for 5,796 donor-recipient-years in total and 4,338 with positive amounts of aid. The temporal domain is 1995 through 2003 which is limited by access to the important news coverage data.

2.4.3 Results

Having introduced data and models, I will first turn to my predictions about the applicability of the *zero-aid case* vis-à-vis the other cases. I then present the results from the mixtures-of-experts model to understand if a recipient receives any aid, *when* the actual amount is driven by *bargaining* between the donor and the recipient, and *when* it is driven by the donors' winning coalitions's *humanitarian* preferences.

The theory suggests that greater recipient's misery, news coverage, and donor's saliency for policy concessions increase the probability that a recipient receives any aid at all and that the *zero-aid case* is less likely to apply. These predictions are tested using a simple probit including the aformentioned operationalizations. Because of the non-linearity of the model and the interactions, I show the effects by calculating the first difference of the probabilities when each variable changes by a preset amount. Specifically, I raise the dummy variables from zero to one, decrease the GDP/capita and distance from one standard deviation below the mean to one standard deviation above it, and increase the news coverage and the number of people affected by disasters from a standard deviation below the means to one above. I draw 1,000 parameter values (King, Tomz & Wittenberg 2000), calculate the distribution of first differences of the probabilities averaged across the data, and summarize this distribution by depicting the median and central 50% and 90% confidence intervals.

The expectations are mostly found in the data as Figures 2.8 and 2.11 in the online appendix demonstrate. Increases in news coverage, the recipient's misery, and the donor's saliency over policy concessions substantively increase the probability that a recipient receives any aid at all. Even though these empirical relationships are hardly surprising as they have been reported before, they have a different interpretation in the context of my theoretical model. They suggest that both, *bargaining* and *humanitarian* incentives are more likely to factor in the aid allocation. Next, I will turn to testing *when* each of these two cases becomes more likely vis-à-vis the other conditional on there being any aid at all.

The main analysis is about *when* each motive drives the actual allocation of aid for cases for which the *zero-aid case* does not apply. For this reason, I drop all observations that are equal to zero, take the logarithm, and run the mixtures-of-experts models. There are three separate models to try to account for the unobserved valences for the leaders: without either donor or recipient region dummies, with only donor dummies, and with only recipient region dummies. Judging by the the Bayesian Information Criterion (BIC) for each model, the model with donor dummies performed best. The ensuing analysis is based on that model. The results based on the other two models are substantively very similar and are available in the online appendix in Figures 2.9 and 2.10.

The main quantity of interest is how the prior probability that some observation y_{it} belongs to either the *bargaining* or the *humanitarian* case responds to the changes in news coverage, saliency and the humanitarian variables. As the probability $Pr(s_{it} = k|\cdot)$ is modeled through a logistic function, the magnitudes of changes are difficult to discern. As above, I forego discussing the parameters altogether and relegate them to Figure 2.13 in the online appendix. Instead, I will present the simulated quantities of main interest in a series of graphs, which are calculated the same way as for Figure 2.8.

Let's first consider the effect of the amount of news coverage which is expected to increase the probability that the *humanitarian* case best explains the variation in aid. The lower panel of Figure 2.2 shows the result. Increasing news coverage from a standard deviation below its sample mean to one standard deviation above increases the probability that an observation is best explained by the variables associated with the *humanitarian* case. The median estimate of the magnitude of the increase is 63 percentage points [47, 71]. The numbers in the brackets show the the 25^{th} and the 75^{th} percentiles of the simulated effects. This result suggests that greater news coverage, *ceteris paribus*, makes it more likely that the donor and and the recipient are not bargaining over a policy concession, but that the donor leader caters to his winning coalition's humanitarian preferences. This is expected from the theory.

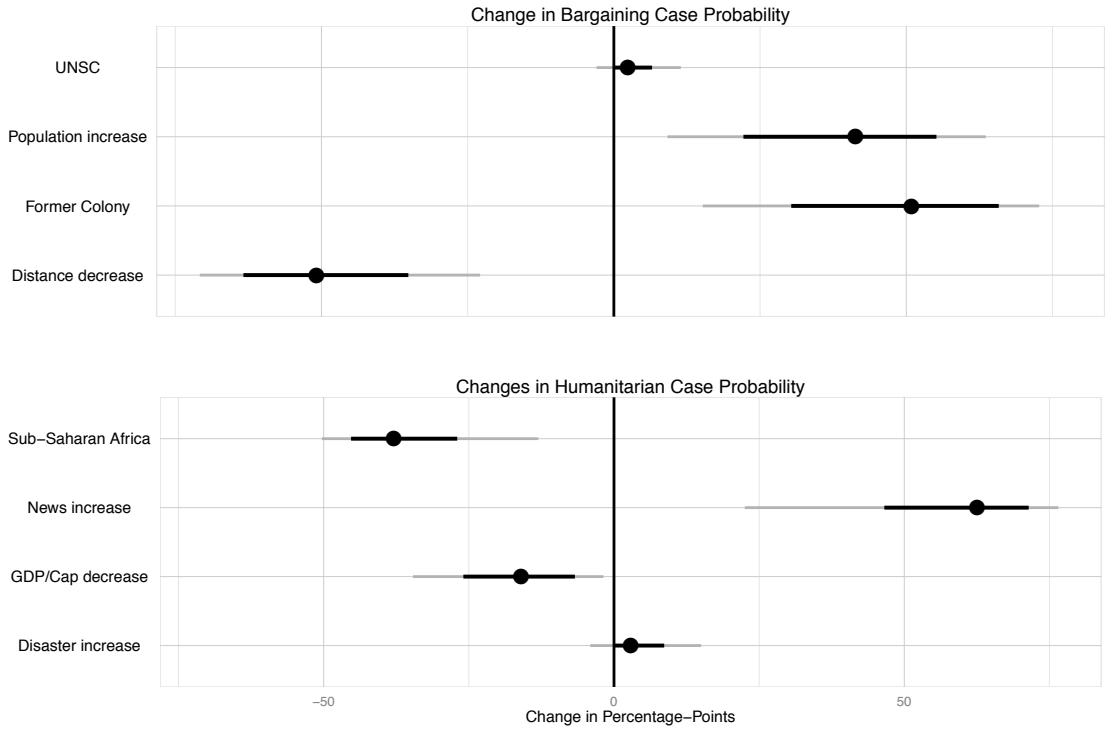

Figure 2.2 : **Data-averaged First Difference for the Probability of *Bargaining* and *Humanitarian* Cases Apply.** The upper panel shows the effects on the probabilty that *bargaining* best explains aid, the lower panel does the same for the *humanitarian* case. The gray and black lines give the 50% and 90% confidence intervals, respectively. The dots denote the median.

The estimate of the effects of the disasters is mostly in the predicted direction as well, but small in magnitude. The effect is an increase by three [0, 9] percentage points with a total of 74% of all simulated first differences greater than zero. Last, the effects for the Sub-Saharan African recipients and those with a smaller GDP/capita are opposite to my expectations. The *humanitarian case* changes its applicability by

-38 [-45, -27] and -16 [-26, -7] percentage points for Sub-Saharan African recipients and when GDP/capita declines from a standard deviation below the mean to one stardard deviation above, respectively.

Turning to how the saliency of political concessions for donor affects whether *bargaining* best describes the observed amount of foreign aid, the upper panel in Figure 2.2 displays first differences calculated the same way as before. Evidence in support of my predictions is better with respect to the donor saliency variables. There are sizeable effects in the predicted direction for former colonies and when increasing the population of the recipient from the mean by one standard deviation. Colonial status makes it 51 [30, 66] percentage points more likely that *bargaining* occurs between the donor and the recipient. The increase in the recipient's population increases the same probability by 41 [22, 55] percentage points. Being on the UNSC makes a recipient only marginally more likely to be bargained with; the median effect is a two percentage point increase [0, 7] with 76% of all simulation draws falling on the positive side. However, this effect is slightly sensitive to the exact model specification. Whereas the median effect rounds either to zero or slightly positive, the 25^{th} percentile of the effect may round to a decline of one percentage point. The lowest estimate of the fraction of simulations that are positive is 62% (see Figures 2.9 and 2.10.). In contrast, a decrease in distance makes *bargaining* less

likely by 51 percentage points [-63, -35].

The evidence is largely supportive of the theory's predictions. First, all of the simulated changes in the variables make it more likely that the amount of aid follows either the *bargaining* or *humanitarian* case. Second, more extensive disasters and more news coverage make the donor leader more likely to provide aid because of incentives to appear humanitarian vis-à-vis his winning coalition. Third and last, donor leaders are more likely to bargain over policy concessions when the recipient is more populous, a former colony, and (slightly) when it is a member of the UNSC.

If my arguments are pertinent for explaining foreign aid, then a statistical model reflecting them should fit the data better than others. Specifically, I compare the three specifications of the mixtures-of-experts model to statistical models that are inspired by the work of Bueno de Mesquita & Smith as well as by Lumsdaine and Van Belle. As I am using different sets of donors and recipients as well as somewhat different data sources than these authors do in their articles, comparing the mixtures-of-experts models to their models would lead to a comparison of the model structures, data sources, and operationalizations. That would render opaque the difference that the model structure makes. Therefore, I use model specifications that are consistent with their theoretical work, but rely on the data sources and operationalizations introduced above. In addition, I also estimate a "garbage can" model, which enjoys

prominence in the literature.

For the Bueno de Mesquita & Smith Model, I include the donor's and the recipient's resources, the recipient's winning coalition size, and my four measures of policy concession saliency. I capture the thrust of the arguments by Lumsdaine and Van Belle by including my measures of the recipient's misery, news coverage, and their interactions as well as the donor's resources. Models also include a third-order polynomial of time. The "garbage can" model includes the union of all variables. Analogously to above, each model is estimated three times: without any fixed effects, with donor-specific dummies, and with recipient region-specific dummies.

The models are compared using the BIC. This criterion is an important yardstick for the mixtures-of-experts as they penalize models with large number of parameters as several variables appear twice in the models' hierarchical components. If this added complexity is unwarranted given the data, then the penalties would disadvantage the mixtures-of-expert model.

Figure 2.3 shows that the mixtures-of-experts models perform the best against almost all other models; only the "garbage can" model with donor fixed effects competes with the mixtures. However, the atheoretical nature of this "garbage can" model leaves unclear which theoretical arguments it speaks to. These rankings show that it is the model structure and neither the fixed effects, nor the covariates sets by

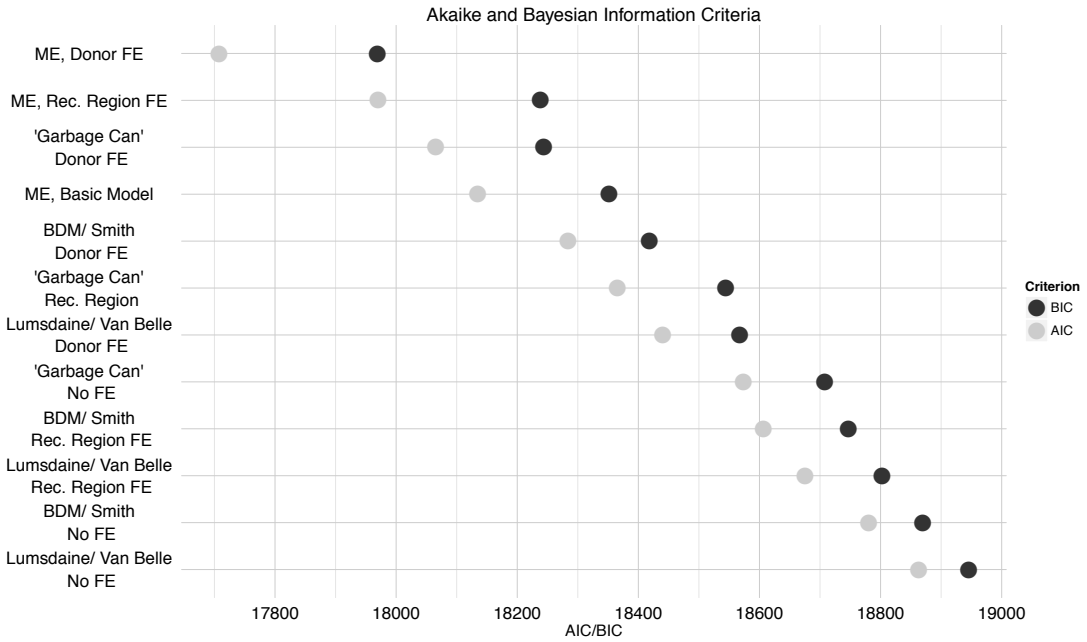

Figure 2.3 : **Akaike and Bayesian Information Criteria for each Model.** Gray dots denote the AIC, black dots the BIC. The models are sorted along the ordinate by their BIC. Lower values for either are preferred. The competitor models' coefficient estimates can be seen in Figure 2.15 in Section F of the online appendix.

themsleves that matters for the improved fit of the mixtures-of-experts model. We can therefore conclude that my theoretical model provides important insights into the logic of aid flows; this improvement comes from allowing for *selfish* and *selfless* motives to matter in a strategic foreign aid process.

2.5 Conclusion

These findings offer a reconciliation of decades of scholarship which struggled to show whether aid was given for *selfless* or *selfish* reasons. This paper shows that the reason there is evidence for either view on average is that each logic applies to only a subset of all cases. Some cases are *selfish* when states bargain, some are *selfless* when the donor leader has incentives to heed humanitarian calls, and on average they look a bit like both. Others have suggested before that both motives are at play (e.g. van der Veen 2011), however this paper offers the additional crucial insight that these logics may be at play for any donor, any recipient, and at any time under identifiable cases. That is, a donor can act selfishly toward some recipients, but selflessly vis-à-vis others at the same time. Additionally, and perhaps most importantly for future research, my model provides insights into when either applies.

Scholars of foreign aid have long been able to predict the amounts of aid reasonably well. However, statistically accounting for variation in this dependent variable is insufficient for understanding how foreign aid works. Such a task requires deeper theorizing about the politics behind aid. In particular, recent efforts have used sophisticated theories of political economy to model foreign aid (e.g. Bueno de Mesquita & Smith 2009*a*, Milner & Tingley 2010). However with greater theoretical complexity comes an increased burden on statistical models as omitting the structure

implied by the theoretical model is prone to lead to fallacious conclusions (Signorino & Yilmaz 2003, Arena & Joyce 2011). I account for the theory's structure using the mixtures-of-experts model, which offer novel, substantively important insights into the workings of foreign aid.

One example should highlight the gains. My model reveals how common wisdom may lead practitioners astray. For instance, development activists have been working to raise awareness about poverty with the goal that donors increase development aid to 0.7% of the donor's GDP (see Clemens & Moss 2007). My results show that such greater attention does lead to more foreign aid, but at the same time it becomes more likely that the donor leader demands policy concessions from the recipient as well. This happens when the increased attention causes a move from the *humanitarian* or *zero-aid* cases to the *selfish humanitarian* case in Figure 2.1. If more awareness leads to a greater pursuit of policy concessions by the donor, then recent work suggests that aid will not bring about favorable results for the recipient's population (e.g. Bearce & Tirone 2010, Girod 2012). It is still the case that greater awareness of development issues leads to more aid, but donor leaders will design the foreign aid package to fit their survival imperatives. In the example here, this means adding the demand for a policy concession which may bring about outcomes that are contrary to what was ostensibly sought.

This implication of my model speaks to the broader issue of principal-agent relationships when the principals lack expertise to judge what the agent is doing. Even though democracies may generally be more transparent (Hollyer, Rosendorff & Vreeland 2012) so that citizens can better monitor their government, citizens often lack the expertise to judge complicated details, such as the amount of aid or whether a policy concession took place. This in turn creates an incentive for the government to comply with citizens' wishes in a way that is visible and easily comprehensible when it is beneficial (Majumdar, Mani & Mukand 2004, Mani & Mukand 2007). However, this asymmetry in expertise creates clandestine incentives. In this vein, Kono (2006) shows democratic governments tailor facets of the policy so that it may undermine its ostensible compliance with citizens' wishes. This is in Kono's case that governments errect hard-to-assess non-tariff barriers to balance out lower nominal tariffs, whereas governments in my case may seek additional policy concessions. In either case, the government is not punished as citizens lack the expertise to judge all details of the policy.

This in turn touches upon the rational design of institutions literature which gained prominence in the international relations literature (e.g. Koremenos, Lipson & Snidal 2001); donor leaders tailor the details of an aid package in terms of its amount and whether a policy concession is demanded. This inevitably raises the question of

what determines the rational design of many other features of foreign aid that are commonly studied to matter for aid effectiveness, such as the channels of delivery or the degree to which aid is tied. Since these design elements can have profound consequences on the effectiveness of aid, scholars should extend upon the small but growing number of articles that have also studied the design of aid (Fariss 2010, Winters 2010, Winters & Martinez 2012, Dietrich 2012). It should be particularly fruitful to consider these design aspects as arising from different motives that can bring about foreign aid. In this vein, Chapter 3 of this dissertation builds upon this paper and shows how the donor government can exploit its winning coalition's lack of expertise and reneges on the promises of foreign aid in the *humanitarian case*; interestingly, this largely does not occur in the *bargaining case*. Greater insight into the domestic bases of the design of foreign aid should greatly improve scholars' and practitioners' understanding of how aid affects outcomes in recipient countries.

2.6 Appendix

2.6.1 Equilibrium

The intuition behind the equilibrium is similar to that in Bueno de Mesquita & Smith (2009*a*) which I stated in the body of the text. However, the details of solving the game are a bit different. First, whereas Bueno de Mesquita & Smith (2009*a*) derived a function for the extent of the policy concessions for a given amount of aid, I modeled policy concessions in a discrete manner. Thereby a minimum price for the policy concessions follows. Second, the optimal choice for the extent of the policy concessions is calculated by Bueno de Mesquita & Smith (2009*a*) with the aid allocation following from the correspondence between concessions and foreign aid. In contrast, I let the donor leader AL choose a bundle of aid and which policy concession to ask for.

Let's first derive $V^*(R, W)$, which is the maximal utility from public and private goods that the leader can provide for a given amount of available resources and a given size of the winning coalition. Leaving out everything associated with foreign aid and the policy deal, the survival condition for either leader is $Q < \theta + u(z) + v(g)$. As θ is unobserved but has a known cumulative density function $F(x)$, the probability of survival is $1 - F(Q - v(g) - u(z))$. As the leader only cares about survival, he

wants to minimize $F(Q - v(g) - u(z))$ which he does by maximizing $u(z) + v(g)$. Both g and z have a price and cannot exceed the budget constraint in cost. That is, $pg + Wz \leq R$. Let $g^*(R, W)$ and $z^*(R, W)$ be the values that maximize the sum $u(z) + v(g)$ under the budget constraint. It is obvious that different sizes of the winning coalitions and budgets yield different maxima. It useful to define the function $V^*(R, W)$=$u(z^*(R, W)) + v(g^*(R, W))$. $V^*(R, W)$ gives the maximal utility from public and private goods that the leader can supply to the winning coalition of a given size under a given budget constraint. The comparative statics of $V^*(R, W)$ are $\partial V^*/\partial R > 0$ and $\partial V^*/\partial W < 0$.

There are two cases to consider. First, if the donor proposes some aid-for-policy deal with a positive amount of aid, but does not ask for a change in policy (ie. $(r > 0, y = 0)$), BL will always accept it. If the recipient leader can stick to his preferred policy of $y = 0$, then any positive amount of aid is desired. Second, if AL proposes a deal that involves a change in policy (ie. $(r > 0, y = 1)$), then BL will only accept the deal if his survival prospects stay the same or are improved. That is, there is a minimum price that needs to be met in order for BL to agree to such a deal which incurs disutility of σ_B to his winning coalition. This minimum price $\underline{r}$ is the solution for r in $V^*(R_B + r, W_B) - \sigma_B = V^*(R_B, W_B)$. Defining for each country $i \in \{A, B\}$, $D_i = 1/\sqrt{p^2/W_i + p} + \sqrt{1/W_i - 1/(W_i + p)}$, the minimum price is $\underline{r}$=

$\left(R_B - \frac{\sigma_B}{D_B}\right)^2$ - R_B.

The donor leader faces a similar survival problem, but he gets to move first and propose the aid-for-policy deal. He knows that any deal not asking for a policy change but offering a positive amount of aid will be accepted, and any demanding a policy change will only be accepted if aid is greater than $\underline{r}$. The leader's objective function $\tilde{\Delta}$ is the difference in utility for the donor leader's winning coalition that an aid-for-policy (r, y) deal can provide:

$$\tilde{\Delta}(r,y) = \begin{cases} V^*(R_A - r, W_A) + h(n,d)f(r) - \sigma_A & \text{if } r < \underline{r} \;\&\; y = 0; \\ V^*(R_A, W_A) - \sigma_A & \text{if } r < \underline{r} \;\&\; y = 1; \\ V^*(R_A - r, W_A) + h(n,d)f(r) - \sigma_A & \text{if } r \geq \underline{r} \;\&\; y = 0; \\ V^*(R_A - r, W_A) + h(n,d)f(r) & \text{if } r \geq \underline{r} \;\&\; y = 1. \end{cases}$$

The donor leader will pick $(r, y) = \arg\max_{r \geq 0, y \in \{0,1\}} \tilde{\Delta}(r, y)$. Whereas the easiest way to find this optimal choice is to consider Figure 2.1, which actually gives $\Delta(r, y) = \tilde{\Delta}(r, y) - V^*(R_A, W_A) + \sigma_A$ for an easier depiction, Proposition 1 gives the technical result.

The equilibrium aid-for-policy deals and thus the allocated aid can be stated

more formally as in Proposition 1.

Proposition 1: Denote $\tilde{r} = R_A / \left[\left(\frac{D_A}{h(n,d)} \right)^2 + 1 \right]$. $V^*(R, W)$ defines the maximum utility from optimal provisions of public and private goods that a leader can provide to a winning coalition of size W with a budget R. In the subgame perfect equilibrium of the game, AL offers:

$$(r^*, y^*) = \begin{cases} (0,0) & \text{if } V^*(R_A, W_A) > V^*(R_A - \tilde{r}, W_A) + h(n,d) f(\tilde{r}); \\ (\tilde{r}, 0) & \text{if } V^*(R_A, W_A) \leq V^*(R_A - \tilde{r}, W_A) + h(n,d) f(\tilde{r}) \text{ and} \\ & \quad V^*(R_A - \tilde{r}, W_A) - \sigma_A + h(n,d) f(\tilde{r}) > V^*(R_A - \underline{r}, W_A) + h(n,d) f(\underline{r}); \\ (\underline{r}, 1) & \text{if } V^*(R_A - \tilde{r}, W_A) - \sigma_A + h(n,d) f(\tilde{r}) \leq V^*(R_A - \underline{r}, W_A) + h(n,d) f(\underline{r}); \\ (\tilde{r}, 1) & \text{if } \tilde{r} > \underline{r}, \end{cases}$$

which is subsequently accepted by BL.

2.6.2 List of Recipient Countries

Caribbean & Non-Iberian America	Guyana, Haiti, Jamaica, Trinidad & Tobago
Central & Eastern Europe	Armenia, Afghanistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan
Latin America	Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, Venezuela
Sub-Saharan Africa	Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea-Bissau, Ivory Coast, Kenya, Liberia, Mali, Mauritania, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Somalia, Tanzania, Togo, Uganda, Angola, Botswana, Djibouti, Eritrea, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, South Africa, Sudan, Swaziland, Zambia, Zimbabwe
Middle East & North Africa	Algeria, Egypt, Iran, Iraq, Jordan, Libya, Morocco, Oman, Saudi Arabia, Syria, Tunisia, Turkey, United Arab Emirates
East Asia	North Korea, Mongolia
South Asia	Bangladesh, Bhutan, India, Nepal, Pakistan, Sri Lanka
Southeast Asia	Cambodia, Indonesia, Laos, Malaysia, Philippines, Thailand
Pacific Islands	Fiji, Papua New Guinea

Table 2.2 : **List of Recipient Countries and Regions.**

2.6.3 Identification Check

John Geweke argues identifiability of parameters in statistical models *per sé* is not a problem if your quantity of interest is unaffected by it.[8] To this end, I check problems of identifiability of my mixture models with respect to the central quantity of interest of this paper, namely Figure 2.2 in particular as well as in Figures 2.9 and 2.10.

General identifiability of finite mixture and of mixtures-of-experts models is discussed by Hennig as well as by Frühwirth-Schnatter.[9] The conditions are difficult to verify but, as Imai and Tingley point out in footnote 27, statisticians' use of mixture-of-experts models place considerably greater demands on the identifiability and correlations in the data than the applications by Imai and Tingley and in this paper.[10] Unlike these applications, statisticians routinely use the same variables for each covariate set (ie. $\mathbf{x}_{it}^{(h)}$, $\mathbf{x}_{it}^{(b)}$, $\mathbf{m}_{it}$, and $\mathbf{z}_{it}$ in this paper's notation).

Grün & Leisch (2012), the authors of the *flexmix* package, which is used in this paper to estimate the mixture-of-experts models, propose a simple resampling procedure to check for identifiability issues. To this end, I bootstrap my data, estimate

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8 John Geweke, "Interpretation and inference in mixture models: Simple MCMC works," *Computational Statistics & Data Analysis*, Volume 51, Issue 7, 2007, pg. 3529-3550.

9 See Christian Hennig, "Identifiablity of Models for Clusterwise Linear Regression," *Journal of Classification*, Volume 17, Number 2, 2000, pg. 273–296; Sylvia Frühwirth-Schnatter, *Finite Mixture and Markov Switching Models*, Springer Verlag, 2006.

10 Kosuke Imai and Dustin Tingley, "A Statistical Method for Empirical Testing of Competing Theories," *American Journal of Political Science*, Volume 56, Number 1, 2012, pg. 218–236.

the three mixtures-of-experts specifications discussed in the paper, simulate several draws (100) of the quantities depicted in the figures mentioned before, and save them. Notice that, unlike in the usual applications of bootstrapping, the goal is not to characterize the full bootstrap distribution, but to detect problems of identifiability and instability. Therefore, this computationally-intensive procedure is repeated only $1,000$ times. (On a dual-core, Intel i5 with 16GB RAM, making use of hyper-threading, the procedure took around 60 hours.)

Each of the figures below shows the bootstrapped replication of Figures 2.2, 2.9, and 2.10. The figures below show that the substantive conclusions from the full sample models that are discssued in the main text of the paper are stable with perhaps the exception of the effect of the UNSC dummy on the *bargaining* probability, which appears cluster more around zero. As a whole, almost all of my results show no signs of identifiability problems. Therefore, my central claims in the paper stand.

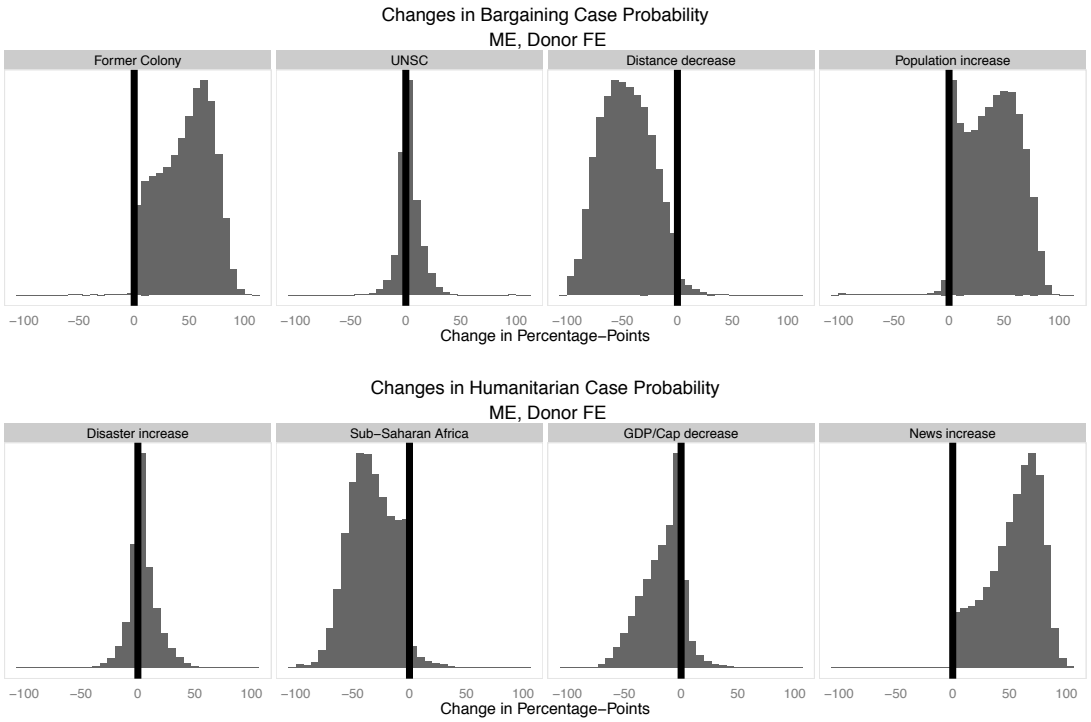

Figure 2.4 : **Check for Identification for Donor FE Model**. This figure is a bootstrapped replication of Figure 2.2. The upper row of panels gives the bootstrapped effects of the *bargaining* variables, the lower of the *humanitarian* variables. Each panel is based on 1,000 bootstrap samples and estimations, saving 100 simulated effects for each. Each simulation was calculated the same way as explained in the paper.

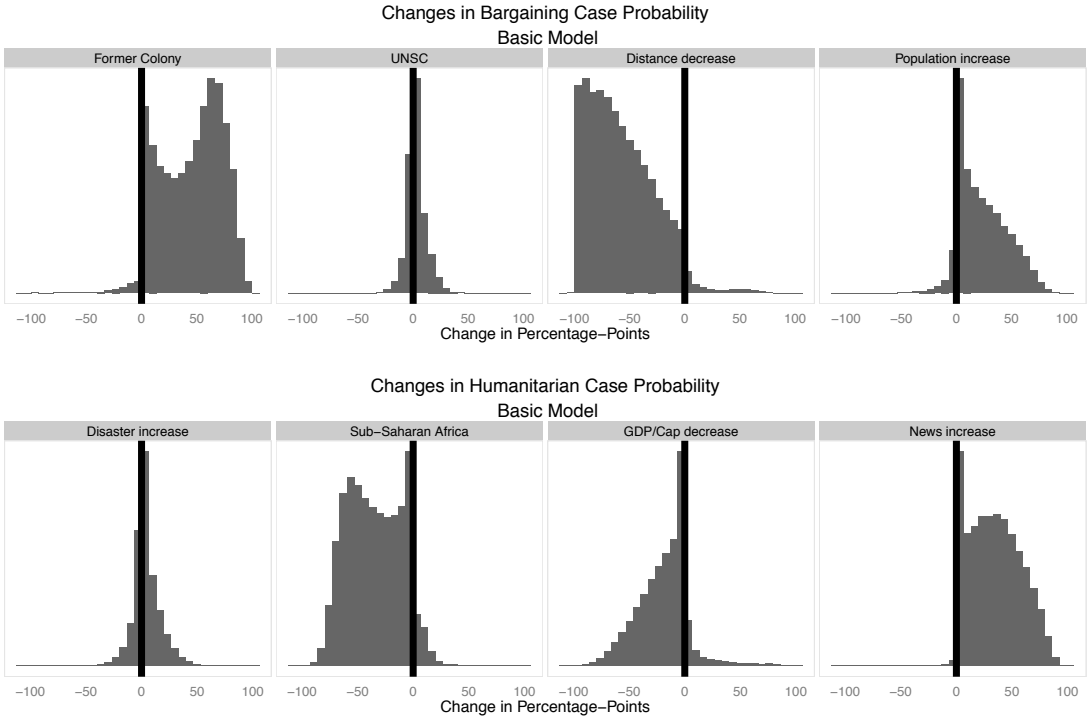

Figure 2.5 : **Check for Identification for Basic Model**. This figure is a bootstrapped replication of Figure 2.9. See caption for Figure 2.4 for details.

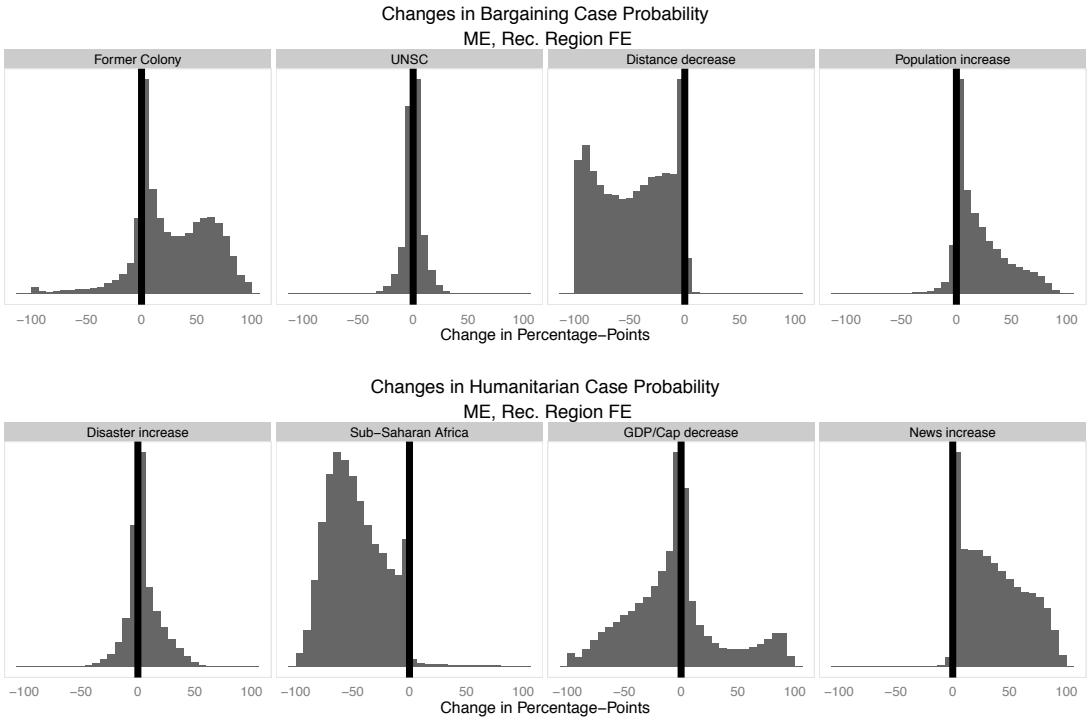

Figure 2.6 : **Check for Identification for Recipient Region FE Model**. This figure is a bootstrapped replication of Figure 2.10. See caption for Figure 2.4 for details.

2.6.4 Validity Check for News Variable

I collected the data on news coverage of each recipient in each donor country in each year by searching the online archives for one major newspaper. These are *Süddeutsche Zeitung* for Germany, *Neue Zürcher Zeitung* for Switzerland, the *New York Times* for the United States of America, *Irish Times* for Ireland, *Corriere della Sera* for Italy, *El Pais* for Spain, *The Guardian* for the United Kingdom, and the *Toronto Star* for Canada.

The validity of this data collection is checked by examining whether the news variable follows predictable patterns. First, one would expect that news coverage is generally highly autoregressive. Theoretical work on the economic logic of newspapers focus on costs and benefits of covering particular countries.[11] Focusing on costs for now, the presence of staff in particular areas and the staff's specialization is a considerable investment by the news organization. These are, in the short-run, sunk costs so that the reporting costs would imply an autoregressive structure. Turning to the benefits, the general relative interest of readers about other countries should be stable as preferences are unlikely to change rapidly. Exceptions are of course particular events, such as disasters, but these are aberrations from the regular news.

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[11] See for example, David Strömberg, "Mass Media and Public Policy," *European Economic Review*, Volume 45, Number 4–6, 2001, pg. 652–663.

Second, the aforementioned disasters should correlate with news coverage. This relationship has been shown repeatedly.[12] Third, two variables can be used to capture the benefits to newspaper covering a country by considering about which countries the readership cares. I measure this by relying on geographic distance, which has often been shown to correlate with news coverage,[13] and a dummy indicating whether the country is a former colony. The justification for both follows the arguments laid out in the *Data & Operationalization* section of the paper.

I perform the validity check by running a total of five regressions. In the "Autoregressive" model, I regress the news variable on its lag. For the "Simple" model, I include only the (logarithm of the) geographic distance in kilometers, the former colony dummy, and the number of people affected by natural disasters. The "Rec. Region FE" and "Donor FE" models include recipient region fixed and donor fixed effects, respectively. Last, the "Full FE" model includes fixed effects for donors, recipient regions, and years. All data sources and transformations are as described in the main text of the paper.

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[12] For example, see Douglas A. Van Belle, "Race and U.S. Foreign Disaster Aid," *International Journal of Mass Emergencies and Disasters*, Volume 17, Number 3, 1999, pg. 339–365; Thomas Eisensee and David Strömberg, "News Droughts, News Floods, and U.S. Disaster Relief," *Quarterly Journal of Economics*, Volume 122, Issue 2, 2007, pg. 693–728.

[13] See for example, Tsan-Kuo Chang, Pamela J. Shoemaker, and Nancy Brendliner, "Determinants of International News Coverage in the U.S. Media," *Communication Research*, Volume 14, Number 4, 1987, pg. 396–414; Haoming Denis Wu, "Geographic Distance and Us Newspaper Coverage of Canada and Mexico," *International Communication Gazette*, Volume 60, Number 3, 1998, pg. 253–263

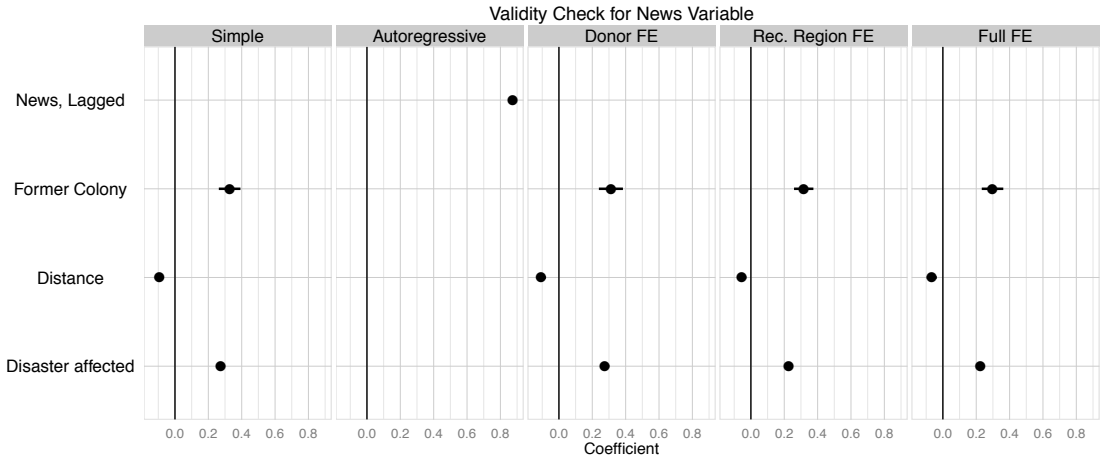

Figure 2.7 : **Check for Validity of News Variable.** The variables (including the dependent variable) are all mean-centered and divided by one standard deviation. The dot shows the coefficient estimate whereas the thin, black horizontal line centered on the dots gives the range of the coefficient plus/ minus two standard deviations. For several variables, this range is very short so that it is covered due to the size of the coefficient. The coefficients for fixed effects and intercepts are supressed. These are available from the author or can be easily calculated from the replication package.

Figure 2.7 gives the four variables' coefficients (plus/ minus two standard errors) for the five separate models. For legibility reasons, I omit showing any fixed effects. The expected patterns are found for the news variable. First, news coverage is highly autoregressive (with a coefficient of roughly .9). Second, an increase in geographic distance reduces news coverage whereas being a former colony and being affected by disasters increases coverage.

These patterns suggest that my news data collection captures the attention paid

by a donor country to a recipient country in a particular year. It is important to note that, even though these variables systematically affect the news volume, there is considerable variation that comes from specific events, such as elections, coups, etc.

2.6.5 Substantive Effects

Probability of Getting Any Aid

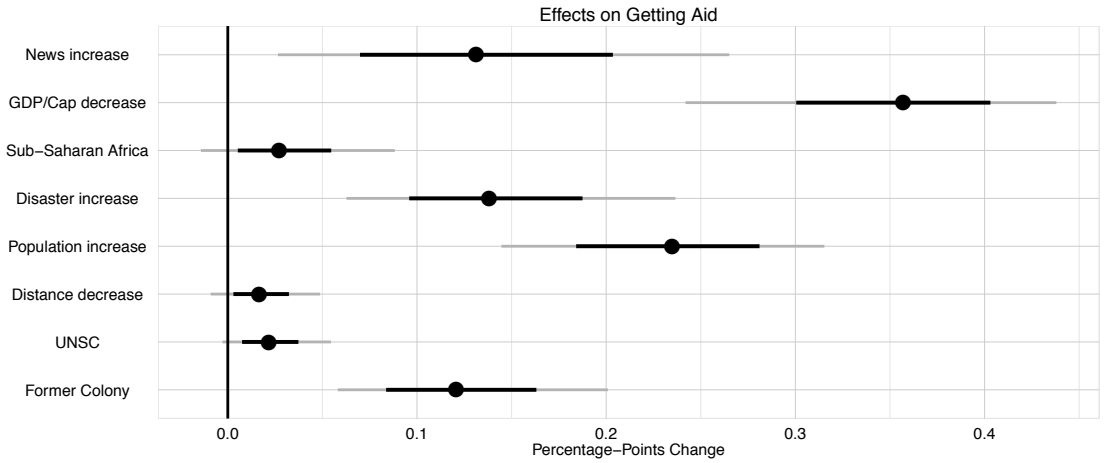

Figure 2.8 : **Data-averaged First Difference for the Probability of Getting Any Aid.** The gray and black lines give the 50% and 90% confidence intervals, respectively. The dots denote the median. See Figure 2.11 for the model's coefficients.

Mixture Model without Fixed Effects

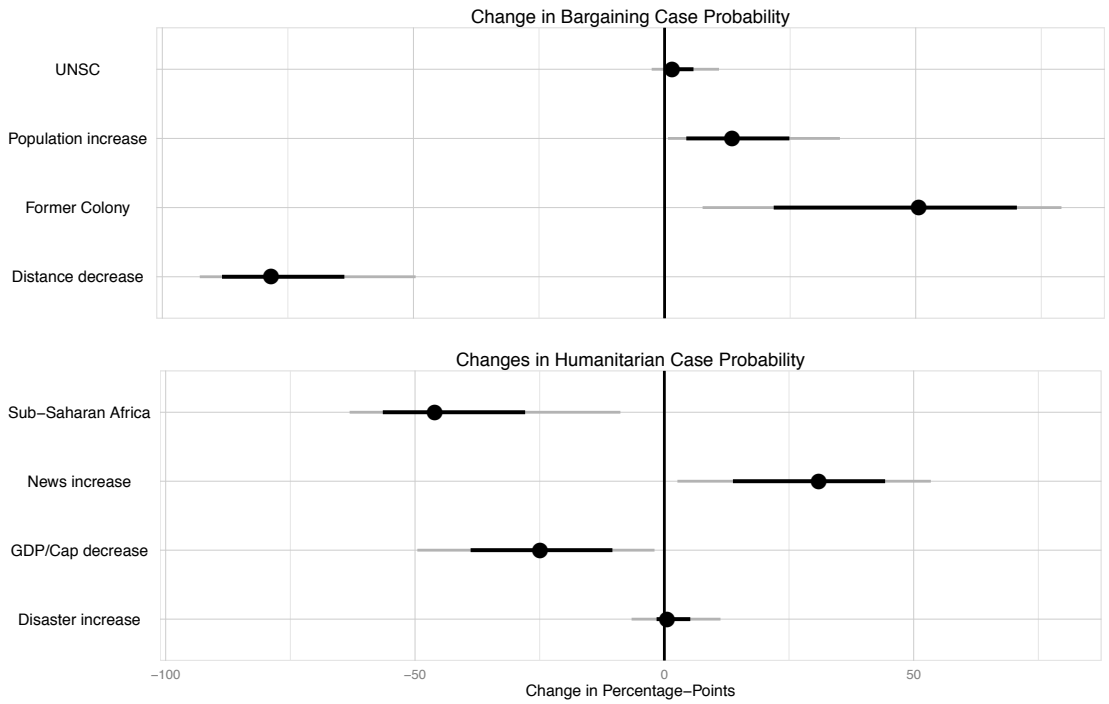

Figure 2.9 : **Effects on the Case Probabilities.** Estimates for the Mixture-of-Experts Models without Fixed Effects. See caption to Figure 2.2 for details.

Mixture Model with Recipient Region Fixed Effects

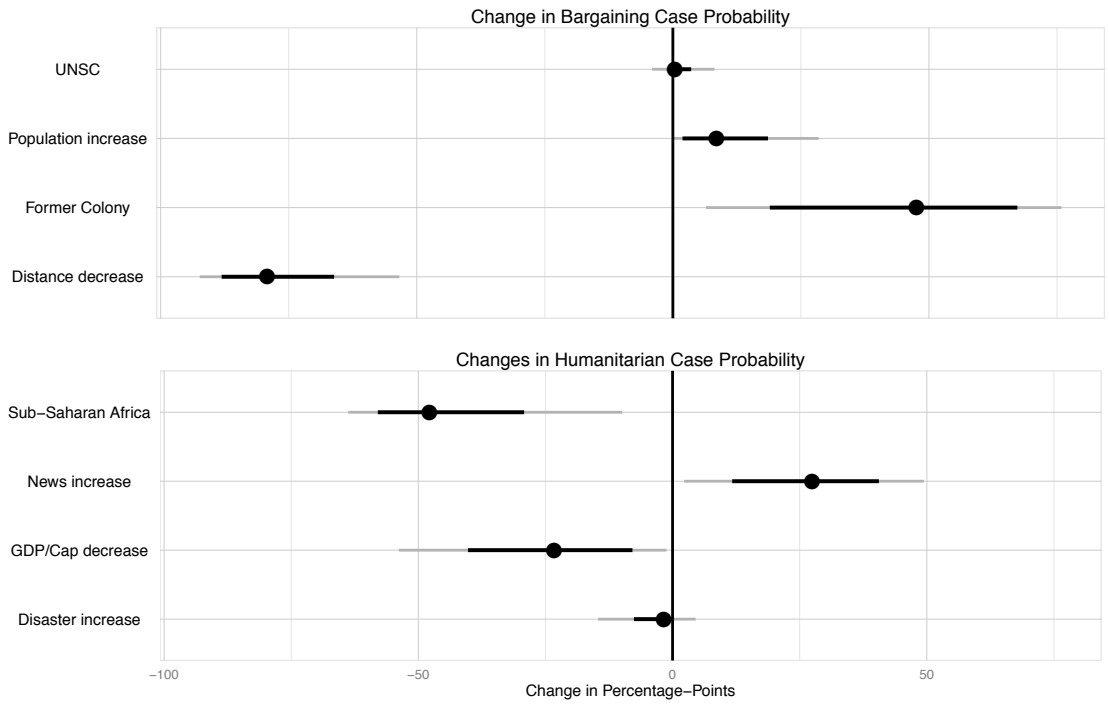

Figure 2.10 : **Effects on the Case Probabilities.** Estimates for the Mixture-of-Experts Models with Recipient Region-Specific Fixed Effects. See caption to Figure 2.2 for details.

2.6.6 Parameter Estimates

Getting Any Aid Model

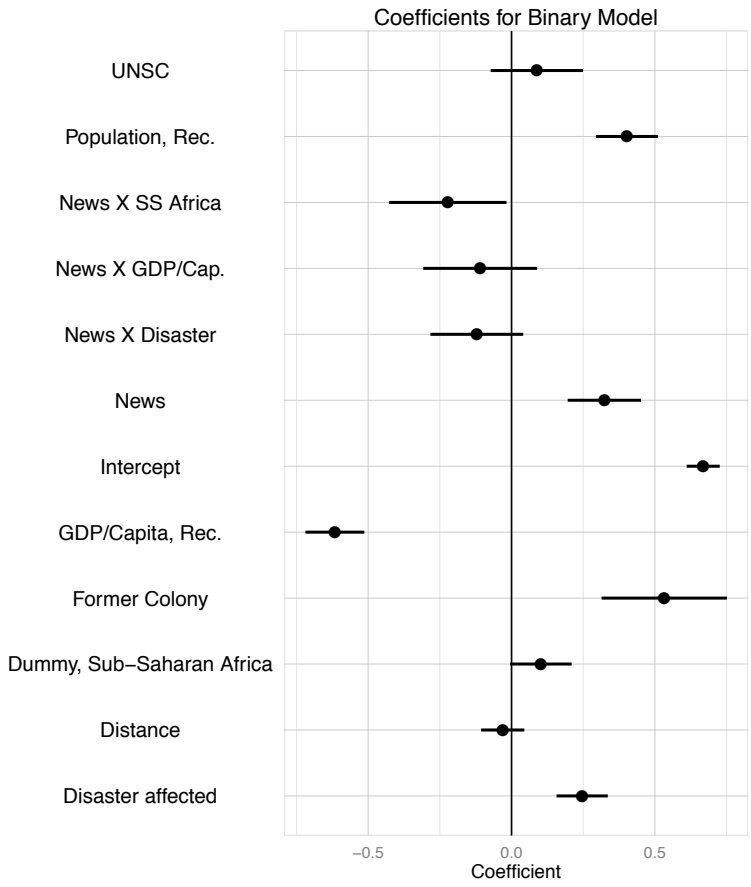

Figure 2.11 : **Coefficient Estimates for the Getting-Any-Aid Model.** See caption for Figure 2.12 for details. See Figure 2.8 for simulated substantive effects.

Mixture Model without Fixed Effects

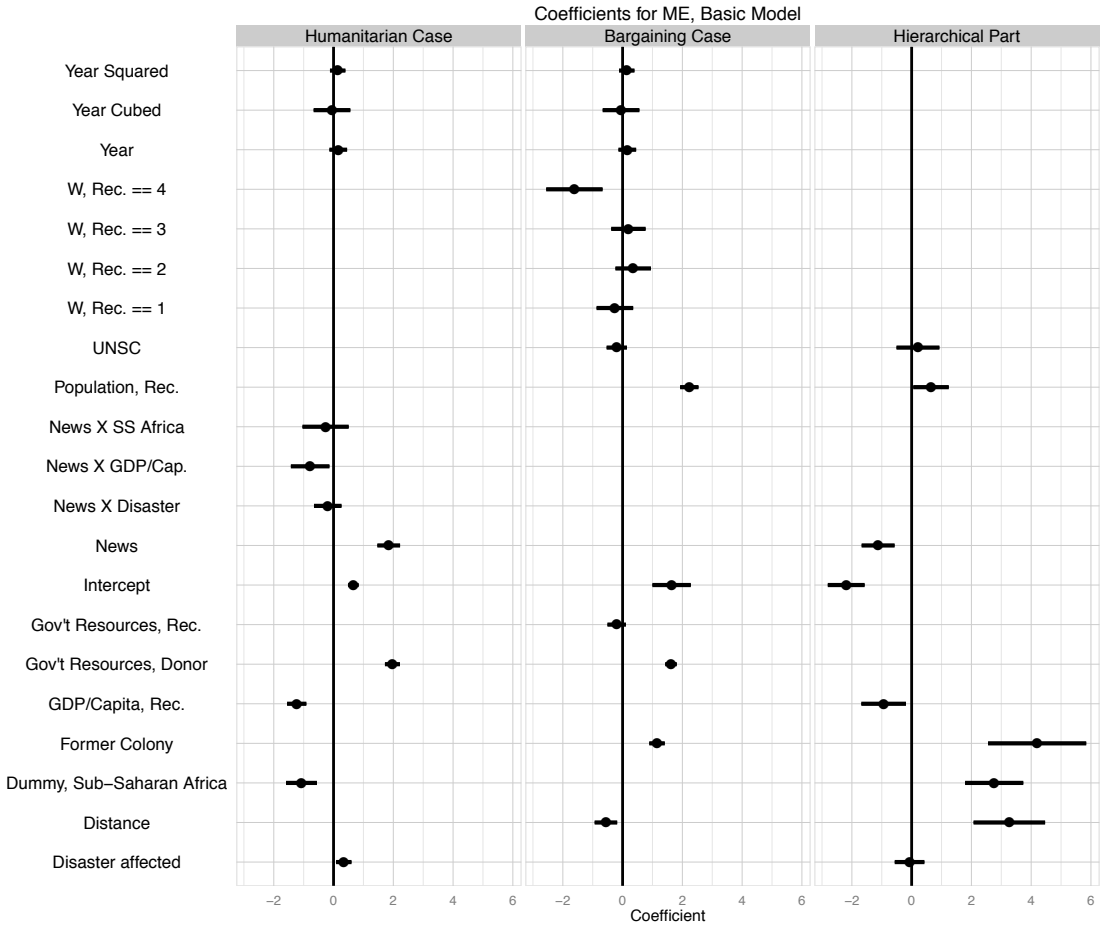

Figure 2.12 : **Coefficient Estimates for the Mixture-of-Experts Models without Any Fixed Effects**. The columns refer, from left to right, to the coefficients on the variables in $\mathbf{x}_{it}^{(h)}$, $\mathbf{x}_{it}^{(b)}$, and $\mathbf{z}_{it}$. The coefficients for $\mathbf{m}_{it}$ appear in the first and second columns as these variables' effects are constant and apply to both cases. The dot shows the coefficient estimate whereas the black horizontal line centered on the dots give the range of the coefficient plus/ minus two standard deviations.

Mixture Model with Donor Fixed Effects

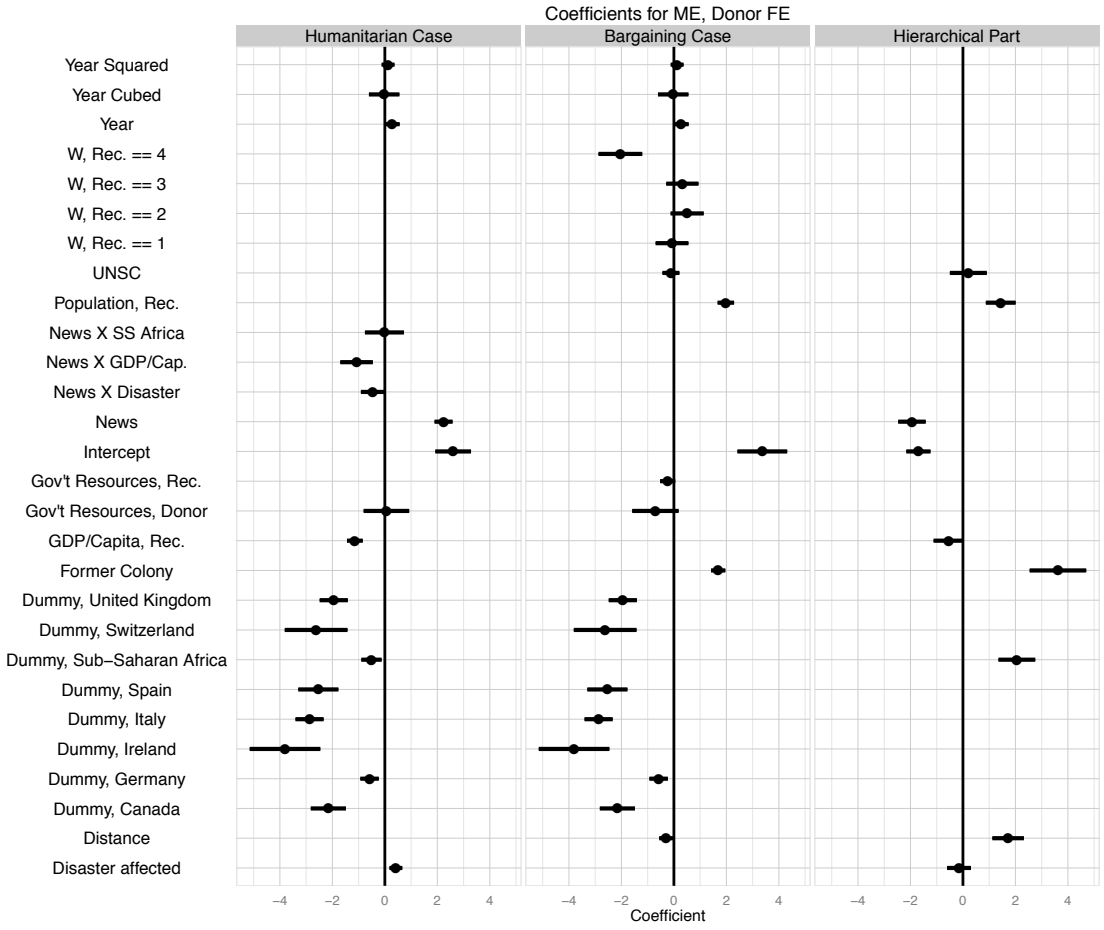

Figure 2.13 : **Coefficient Estimates for the Mixture-of-Experts Models with Donor-Specific Fixed Effects.** See caption for Figure 2.12 for details.

Mixture Model with Recipient Region Fixed Effects

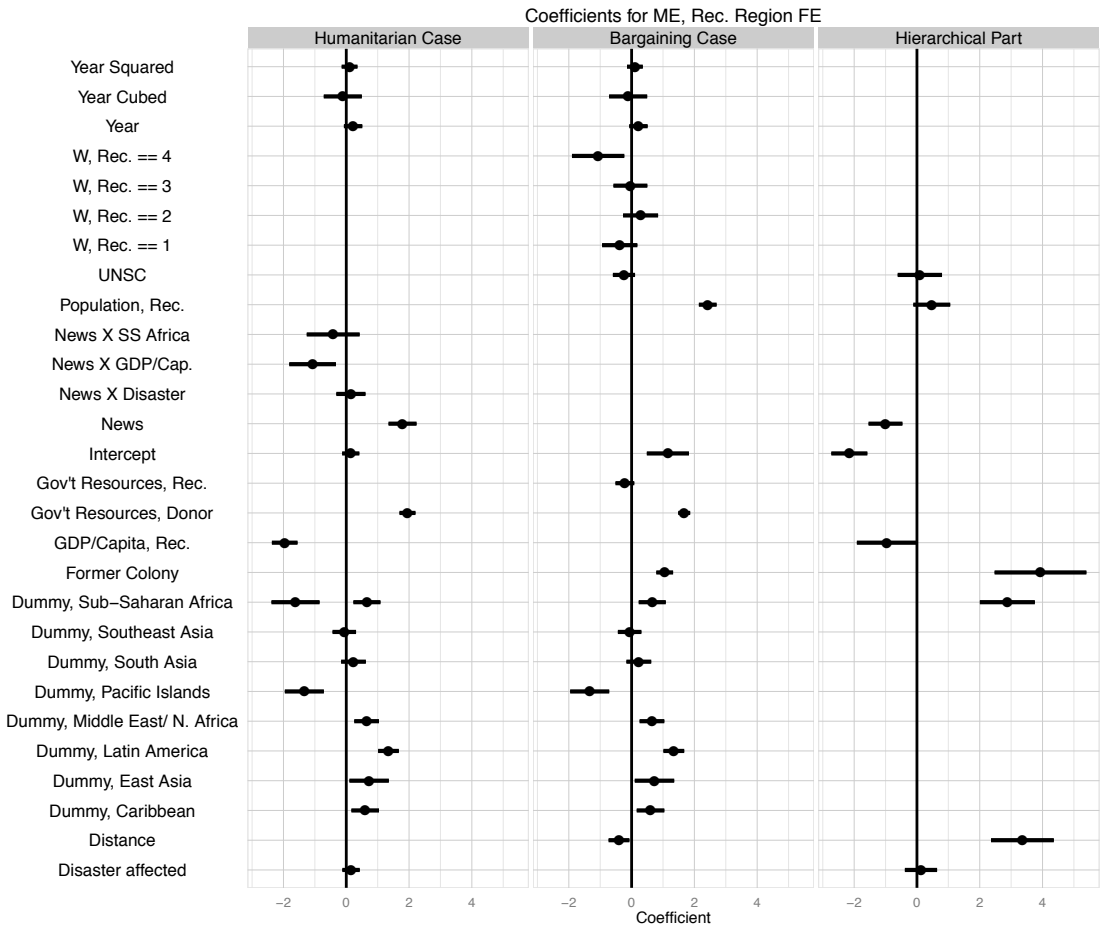

Figure 2.14 : **Coefficient Estimates for the Mixture-of-Experts Models with Recipient Region-Specific Fixed Effects**. See caption for Figure 2.12 for details.

Competitor Models

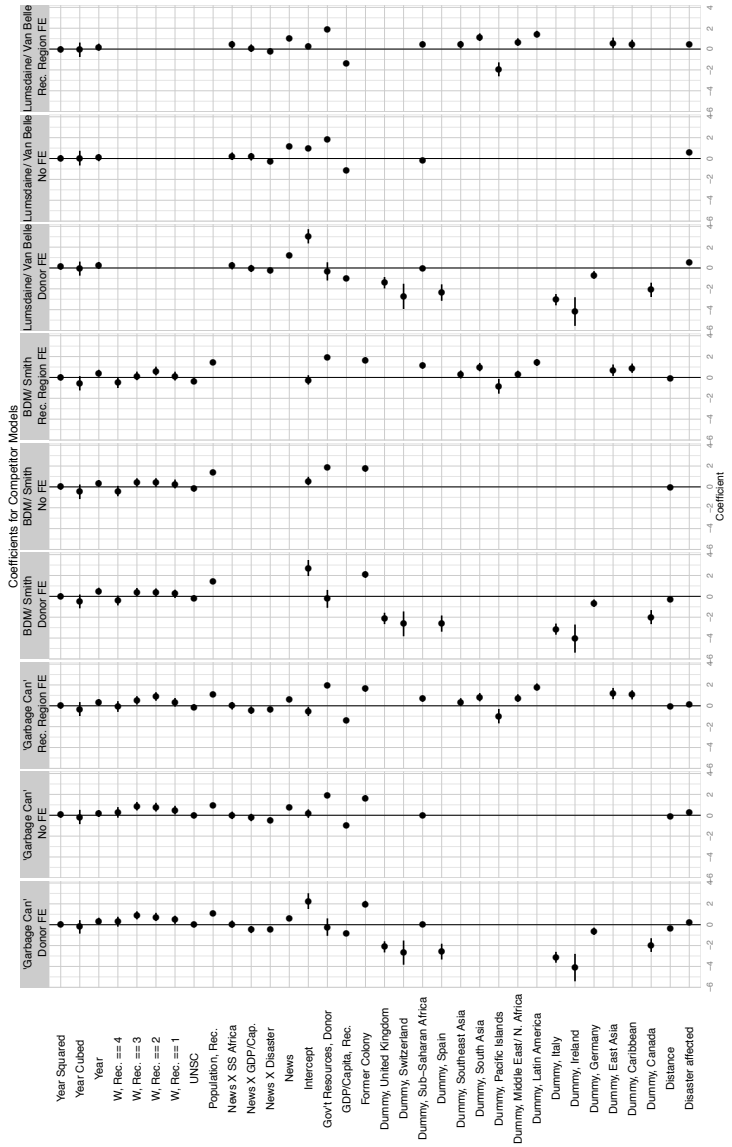

Figure 2.15 : **Coefficient Estimates for the Competitor Models.** See caption for Figure 2.12 for details.

Chapter 3

Strategic Reneging on Foreign Aid Promises

3.1 Introduction

The United States government pledged in 2009 to provide Pakistan $7.5bn in foreign aid over five years but provided only 5% of the amount by mid-2011.[1,2] Similarly, major donor countries of foreign aid failed to honor their promise from 2005 of doubling development assistance by 2010, increasing aid by roughly 40% instead.[3] Further, activists accused the United States' government in 2010 for failing to live up to its pledges to fund the Global Health Initiative.[4] These examples are hardly aberrations. One of the few studies on the discrepancy between aid commitments and disbursements reports that OECD donors on average and over decades promised

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1 I would like to thank Mark Buntaine, Simone Dietrich, Yoshi Kobayashi, Amanda Licht, Carla Martinez Machain, Cliff Morgan, Randy Stevenson, Maurits van der Veen, Rob Walker, and Matt Winters for fruitful discussions and suggestions. Previous versions were presented at the University of South Carolina, The University of Texas at Dallas, the Universität Regensburg, 2012 APSA Annual Conference, 2012 European Political Science Association Conference, Rob Walkers research seminar, 2012 International Studies Association Conference, 2012 MPSA Annual Conference, and at Rice University's IR Lunch.

2 See Washington Post, "Aid plan for Pakistan is falling short of promise," August 5, 2011.

3 See The Guardian, "Western countries fail to meet Gleneagles aid pledges," April 6, 2011.

4 See Washington Post, "Rage, panic in AIDS fight," July 29, 2010.

roughly a third more than they eventually provided (Bulíř & Hamann 2008).

Development activists often assign blame for this shortfall to the donor governments. They label them as a "scandal," "cynical," a "poor record" and "fancy accounting" by donors.[5] When surveyed about the reasons for these shortfalls, the donor governments point their fingers toward their own and the recipients' bureaucracies as well as at recipients' failure to live up to donors' conditions (Strategic Partnership with Africa 2008, Section 2). As unfortunate as such shortfalls may be from the perspective of the recipient governments, aside from a small number of largely empirical studies, little knowledge exists about the phenomenon. In particular no theoretical framework exists that is comparable in its scope and detail to what exists in the rich literature on aid allocation.

Why does aid shortfall matter? Research by Lensink & Morrissey (2000) suggests that the risk of aid shortfall is associated with negative macroeconomic outcomes for the recipient country. This might serve as a (partial) explanation for why foreign aid is at best only mildly associated with economic growth (e.g. Burnside & Dollar 2000, Hansen & Tarp 2001, Easterly 2003, Dalgaard, Hansen & Tarp 2004). The argument is that, by insistence of donors, recipient governments use aid promises to plan their

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[5] See, in order, Bob Geldorf in The Sunday Herald, "The summer of 8," June 10, 2007; Oxfam in BBC News, "Aid 'shortfall' to poorer nations," February 17, 2010; ONE's Adrian Lovett in Reuters, "EU missing overseas aid goals as austerity bites," June 25, 2012; and Oxfam Japan in The International Herald Tribune, "Japanese promise more aid to Africa," May 29, 2008.

investments. If promised tranches of aid go undelivered, then the recipient may face financial liquidity constraints which could make recipients abandon unfinished projects. As a result, the amount of aid already spent on projects would be lost without returns on the investment (Leurs 2005, Celasun & Walliser 2008, Desai & Kharas 2010).[6] Concerns over the seemingly dire consequences of underdelivery spurred the major donors to vow to improve the predictability of their funds. The promise was made in the 2005 Paris Declaration on Aid Effectiveness, yet little improvement has taken place since then (OECD 2005,2011).

This paper provides, to my knowledge, the first theoretical model that accounts for aid commitments and disbursement at the same time. The model explicitly focuses on the costs and benefits that occur when aid is committed and when it is disbursed. Following the basic insights from recent political economy models of foreign aid, the donor government transfers resources called foreign aid to the recipient in order to secure some policy concessions from the recipient (Morgenthau 1962, Bueno de Mesquita & Smith 2009*a*). However, there are also benefits for the government if aid is given and is perceived as humanitarian. This might be the case of if the recipient is struck by a disaster or is plagued by diseases (Rioux & Van Belle 2005, van

[6] This is linked to but is distinct from "aid volatility." "Volatility" refers to year-to-year fluctuations of aid disbursement. "Predictability," "shortfall," "underdelivery," "reneging," and "overpromise" refer strictly to the relation between commitments and disbursements of foreign aid, which is exclusively the issue of interest in this paper.

der Veen 2011, Heinrich 2013). Crucially, the news media needs to provide coverage of that recipient so that people become aware of these aid flows (Eisensee & Strömberg 2007); otherwise, people could not and would not credit the leader as having acted in a huminitarian fashion. Policy concessions are appreciated by people in the donor country as they may provide tangible benefits (perhaps cheaper oil, military basing rights); people also value when their government helps the destitute of the world as surveys have shown for decades (Riddell 2007, Ch. 7).

The insight of this paper is that the two different reasons for foreign aid sharply condition the leader's incentives to renege on the commitments. As aid increasingly serves to buy policy concessions, then the incentives to renege wane. After all, the aid commitment served as a truthful signal of what was intended to be obtained, which the leader could provide to his domestic support group. In contrast, aid that is driven more by people's humanitarian preferences requires that news coverage makes citizens aware. Commitments are made when news coverage is high, such as in the case of natural disasters, but disbursement decisions are made when attention has faded. More generally, when there is news coverage of foreign aid, newspapers tend to focus on announcements and disbursement while almost never mentioning that the donor had not lived up to promises. Therefore, leaders can shirk more on disbursements without citizens generally realizing it. The saved money can go to

domestic policies that people also care about (such as schools, police, etc.). In this situation, the leader appears as more humanitarian without sacrificing the money needed to actually be humanitarian.

The statistical results are broadly supportive of my predictions. When news coverage in the donor country about the recipient as well as the humanitarian misery (as measured by the number of people affected by disasters) jointly increase, the amount of reneged upon foreign aid increases on average by five to 12 million U.S dollars. In the absence of a news increase, there is no increase in reneging as the recipient's misery increases. In contrast, as incentives to bargain with the recipient increase (as measured by geographic distance and colonial status), the predicted changes in reneging cluster around zero.

This chapter also proposes a novel research design that addresses a major data issue. The annual data on aid commitments and disbursements as recorded by the OECD's Development Assistance Committee (DAC) are not directly comparable as it records aid commitments as made *in* a year and not the commitments made *for* a year. We also lack knowledge about when funds announced *in* a year are slated to be spent. Previous work either ignores the issue, relies on imperfect surrogate data, or introduces further assumptions which invite bias of unknown size and direction. I address the issue by introducing a statistical approach that allows me to produce

simulated values of disbursements and commitments which are indeed comparable and let me test my predictions.

In the next, section I will survey the sparse previous work on the aid shortfall and also demonstrate that the issue has little room within existing theories of foreign aid allocations. Then I will develop a political economy model of foreign aid as a foreign policy choice. The logic of the model lets me derive predictions about foreign aid commitments and disbursements which together let me make predictions about the shortfall. In the empirical section, statistical results show that my predictions are largely supported.

3.2 Aid Shortfall as Disbursement Delay

If aid is already committed and is thereby "backed by the necessary funds" from the donor, why would the "transactions of providing financial resources" at the recipient's disposal not take place?[7] The scant scholarly work views this divergence as an issue of "disbursement delay;" that is, it studies only the process of disbursing previously committed funds. The main tenants of this view are *managerial problems* and *political interventions*.

First, scholars argue that disbursement delay occurs because of *managerial prob-*

[7] Quotes are from the OECD DAC Glossary on "commitments" and "disbursement", `http://www.oecd.org/dac/glossary/`.

lems. These include that recipient agencies have to obtain numerous authorizations before spending a tranche of foreign aid. Other issues are that donor and recipient accounting systems are incompatible. From this perspective, it is assumed that donors want to spend aid but problems occur in the process of its delivery. The OECD recognized this perspective as an area in which the efficiency of could be improved by simply streamlining procedures between donor and recipient countries. Such problems are at the heart of the 2005 Paris Declaration with which DAC members agreed to make aid more predictable, reduce manangerial impediments to disbursement, and coordinate better amongst each other (OECD 2005).

Second, scholars on disbursement delay also provide some suggestions for how *political interventions* by the donors may retard the release of committed funds. Odedokun (2003) argues that, even though aid commitments are firm obligations for donors to eventually spend resources, donors often include conditions that, if not met, allow donors to renege on their promises. This is easy, he argues, as there is no independent arbiter of whether conditions were actually unmet or the donor simply wanted to renege. Further, the details of what these conditions are and what the recipient did or failed to do are often shrouded in secrecy. With the exceptions of Britain and the Netherlands among statal donors recently, donors publish neither the conditions, nor which conditions were violated when aid is suspended (OECD

2011, Chapter 5). The disbursement delay scholars offer several further situations in which one might expect reneging. For example, Diarra (2011) argues that donors are hesitant to disburse in election years, hedging against uncertainty about the eventual winner. Odedokun (2003) provides two further hypotheses by which peer pressure may make G7 members more likely to fulfill promises and that donors' fiscal deficits may make reneging more attractive.[8]

Unfortunately, the aforementioned work is unsatisfactory on two levels. First, if it is the assumption that donors' commitments reflect a sincere intention to deliver the resources, but delivery is hindered by managerial problems, then donors should be expected to work to remedy the impediments. In 2005, major donors pledged to remove these frictions but have actually done very little (OECD 2011). That suggests that donors may say they want to improve the disbursement of aid but fail to do so. This should compel scholars to reconsider the assumption that donors are sincere about reducing aid shortfall. Second, scholars' ideas about political interventions do not amount to a theoretical understanding for why there is a difference between disbursements and commitments. In particular, no attempt is made to generate insights as to why donors would care about recipients in the very first place, why they would gain from reneging, why they promise but fail to improve predictability,

[8] See also Leurs (2005).

and why the recipient would not stick to what are the conditions of aid. Further, it is unclear why disbursement should be judged against seemingly exogenous pledges. Alternatively, we could try to explain why too much aid was promised in the very first place and not why committed aid was not delivered. In short, this body of work is lacking a theoretical basis for aid commitments and disbursement from which insights about their divergence can come.

The lack of theoretical underpinnings is in stark contrast to the recent literature on foreign aid allocations, where the sources for the motivations behind foreign aid is a supreme topic (Lumsdaine 1993, Bueno de Mesquita & Smith 2009*a*, van der Veen 2011, Heinrich 2013). This focus seems warranted as several recent studies on the consequences of foreign aid highlight the importance of the motivations behind aid for its effectiveness (Bearce & Tirone 2010, Girod 2012). However, the main tenants of this work, if engaged to speak about aid shortfall, would predict that there should never be a difference. In the political economy theories of foreign aid, the promised amount is also optimal to be the paid amount. If aid is a price to be paid for some policy concession (Bueno de Mesquita & Smith 2007, 2009) or is a means for legislators to provide rents to their supporters (Fleck & Kilby 2001, Milner & Tingley 2010, Powers, Leblang & Tierney 2010), then decision-makers should never want to pay less than what was bargained for. Similarly, in such theories, announcing

more aid than optimal for concessions or redistribution provides no benefits by these scholars' modeling assumptions. In work that is anchored in the assumption that foreign aid is a humanitarian deed (Lumsdaine 1993), there is no reason to refrain from transfering aid that was deemed appropriate, perhaps necessary, given the recipient country's development, destitution, and disaster-induced havoc. From either view, there is no incentive for donors to overpromise or underdeliver.

The stark contrast between the disbursement-delay and the aid allocation scholarship exists in another, more abstract sense as well. In the view of the disbursement-delay scholars, shortfall seems to be an unpleasant bug of the aid process whose solution merely requires attention by donors. In a nutshell, the divergence between disbursements and commitments are manageable and idiosyncratic bugs. This is a parallelism to the aid-growth debate. Some think there is too little aid (Sachs 2006), others think there is too much (Easterly 2001, 2006) while both sides agree that the track record on the effectiveness of aid is mixed at best. From either view, the observed aid continues to be suboptimal. Why does such suboptimality persist, ask Bueno de Mesquita & Smith (2009*a*)? They suggest that observed aid is actually optimal; it is just the case that Sachs and Easterly look at aid from the wrong angle. Similarly then, if disbursement delay persists even though donors recognize it to be a problem and recipients obviously dislike it, why does it persist? The solution may

be to consider that shortfall is actually part of the logic that gives rise to foreign aid in the first place. I will show below that it is (at least) not only the proverbial bug in the system, but that reneging on commitments is a feature of the entire foreign aid process that comes about by donors' strategic choices. To this end, the next section introduces such a theory which incorporates aid commitments and disbursements as strategic choices so that I can generate predictions about reneging.

3.3 Committing and Disbursing Foreign Aid

This section develops the rationale behind aid commitments and disbursements as separate strategic choices. At first, I present the framework for aid commitments as developed in a formal model by Bueno de Mesquita & Smith (2009*a*) and extended in Chapter 2. Afterward, I expand upon this logic by considering the donor's incentive to actually disburse the previously committed aid which naturally leads to insights about aid shortfall.

3.3.1 Dual-Motive Aid Allocation

Why is foreign aid promised? Bueno de Mesquita & Smith (2009*a*) propose a framework to understand foreign aid allocations from the perspective that it is nothing more than a bribe. Their model is based on the selectorate theory of politics, which

centers on the assumption that state leaders tailor policy choices to ensure their survival in office (Bueno de Mesquita et al. 2003*b*). However, their model ignores the possibility that politically relevant people could get utility via their government's seemingly humanitarian aid effects. Survey results consistently show that people are greatly supportive of foreign aid for such purposes (Lumsdaine 1993, Singer 2009). I will call this latter enjoyment of one's government aid for humanitarian purposes "warm glow" (Andreoni 1990). Therefore, survival-minded political leaders should act and provide foreign aid for humanitarian purposes even if the recipient has little of value that could be bought through foreign aid. Chapter 2 proposes a revision to the original model which incorporates both rationales for foreign aid. I will recap this extended model and then use it to analyze commitments and disbursements, respectively.

The model assumes that two states may bargain over foreign aid and policy concessions. That is, the donor may offer the recipient some amount of monetary resources (ie. foreign aid) in exchange for the recipient setting some policy to a particular realization. Each country's policy decisions are carried out by a leader whose sole goal is to stay in office. Whether he stays in office depends on whether he provides greater utility to the winning coalition than some challenger could. As the incumbent leader does not know the winning coalition's expected utility from the

challenger, he simply aims to maximize his own winning coalition's utility (Bueno de Mesquita et al. 2003*b*).

Consider first the sources of the donor's winning coalition's utility. It receives utility from domestic policies (e.g. tax level, quality of schools), a particular policy in the recipient country, and the extent to which it experiences warm glow from the aid allocation. The donor leader may alter the recipient's particular policy by providing foreign aid. However, this policy inducement as well as all the domestic policies have to be paid from a limited budget so that any aid inevitably reduces the extent of domestic policies and thereby the winning coalition's utility. Therefore, the donor leader will only offer such aid-for-policy deals that increase the winning coalition's utility more than the loss of domestic policies hurt it.

The two effects of provided foreign aid to the donor's winning coalition work fundamentally differently. The utility from foreign aid that changes the recipient's policy is experienced immediately as citizens appreciate the policy change itself. For example, if aid is used to obtain privileged access to oil, the citizens obtain utility from the marginally lower gas price. In short and crucially for the theoretical argument, no knowledge is required that foreign aid bought this policy change.

This is fundamentally different in the case of the warm glow-inducing effect of foreign aid. As the monetary resources leave the donor country, citizens in the donor

country do not experience the changes in the recipient government's policies that aid brought about. That raises the question of under which circumstances donor citizens would receive utility from aid for humanitarian purposes. The answer resides in the emergening scholarly consensus that, in general, citizens' knowledge about policies is crucially conditional upon the news coverage that the policy receives (Zaller & Feldman 1992, Zaller 1996, Snyder & Strömberg 2010). This is also the case when it comes to foreign policy (Baum 2002, Baum 2004, Baum & Potter 2008). Therefore, the extent to which the donor leader's winning coalition enjoys warm glow which lets it credit the leader's allocation of aid with acting in a humanitarian way depends on the misery of the recipient as well as the volume of news coverage.

Turning to the recipient leader's winning coalition, it cares about similar aspects than its donor country counterpart. It derives utility from the domestic policies and from the same policy that the donor's winning coalition cares about and over which the two countries' leaders might bargain. This policy is completely under the recipient leader's control. If the constellation is right, both leaders can agree to exchange monetary resources called foreign aid for setting the policy to some proposed level; in turn, the deal has to help both leaders as otherwise it would be rejected.

Let's examine how foreign aid affects the components of the winning coalition's

utility. First, foreign aid comes out of the donor's budget and enters the recipient's accounts. The change in resources affects the domestic policies that can be pursed. Donor leader has to reduce the expenditure on domestic policies which his winning coalition dislikes. At the same time, the recipient leader gets to provide more such policies which his winning coalition appreciates. Second, if the donor leader demands a policy change by the recipient and offers enough resources for the recipient to accept, then the donor's winning coalition's utility improves through the revised policies in the recipient country. The magnitude of this increase depends on the saliency for this policy. For the recipient's winning coalition, the utility worsens. Third, foreign aid also generate utility for the donor's winning coalition through warm glow if it learns about the recipient through news coverge and if the recipient is actual impoverished.

With this setup, Chapter 2 provides four possible equilibrium cases. In the *zero-aid* case, the donor leader does not provide any aid as no benefits to his winning coalition can be reaped. This is the case when the possible policy concession is not appreciated by the winning coalition (ie. low salience). The leader also cannot bestow warm glow upon the winning coalition as either the recipient is not in poverty or it is not covered in the news sufficiently. Since giving any aid reduces domestic expenditures, which the winning coalition dislikes, no aid will be provided.

When the recipient leader has a policy under his control that is salient to the donor's winning coalition, then the two states engage in *bargaining* over an aid-for-policy deal. Since all the donor wants is the policy concession, the donor leader only offers the minimum amount of aid necessary to obtain the concession. This situation is most likely to characterize foreign aid as the donor's saliency increases.

If it is the case that the extent of suffering elsewhere is large and there is news coverage of it, then citizens' *humanitarian* impulses are heeded by the leader and aid is promised at a level below the amount necessary to buy a policy concession. In this case, the donor simply promises aid without asking for a policy change by the recipient. The recipient leader accepts the proposal as it beneficial to obtain more money without having to give something up. Last and this is the *selfish humanitarian* case, if the extent of the destitution is large enough that the leader pledges aid above the minimum price necessary for the policy concession, then the leader also demands the concession.

3.3.2 Strategic Reneging

These four constellations describe four causal mechanisms by which we observe aid commitments from the donor to the recipient country. However, committing aid is different from actually releasing money to be at the recipient government's disposal.

Most noticeably, the disbursement of promised aid occurs in tranches of varying length. For example, Roodman (2006) points to an average duration of three years. If commitments and disbursements are separated by time, then a tension between releasing funds for aid and its alternative uses may arise. Specifically, since released funds are no longer available for domestic spending, the donor government will weigh the relative benefits from releasing the money against decreased domestic spending. I will show that the disbursement incentives differ dramatically across the four cases which let me derive my predictions about the determinants of reneging.

The first equilibrium case is the *zero-aid* case. If no aid is announced, then there is nothing to renege upon and the divergence between commitments and disbursements is trivially zero. Let's turn to the other three cases for substantively more interesting predictions about reneging.

Reneging in the Bargaining Case

When *bargaining* characterizes the donor-recipient interaction, then shirking on the commitment is not in the donor leader's interest. In this case, the saliency for a donor's winning coalition is *ipso facto* large enough for the donor leader to forego domestic spending and buy the policy concession. Unless the saliency rapidly saps, the donor continues to find the policy concession valuable and therefore has no incen-

tive to renege on the commitment. After all, if the donor reneges, the recipient will simply shift the policy back to its bliss point which incurs disutility for the donor's winning coalition. For example, when the United States pledged foreign aid to Israel and Egypt to get both sides to agree to the Camp David Accords, the United States faced little incentive to renege and has continued to honor the commitments ever since (Quandt 2005). Therefore, factors that make bargaining more likely *bargaining* should not be associated with reneging.

The crucial assumption behind the above prediction is that the donor's winning coalition's saliency for policy concessions are stable. This may seem odd at first. Under the view on policy making in this paper, that leaders pursue policies in order to satisfy the winning coalition, different winning coalitions should have different preferences over policies. That is, if the leader as well as the composition of the winning coalition change and if the new winning coalition's saliency for the policy is lower, then reneging should occur even in the *bargaining* case. This is unlikely to be of concern here because the above argument should matter little for the most commonly studied donors, which I am drawing my donor sample from as well. The United States, Germany, Switzerland, Ireland, and Italy (as well as the other donors that usually appear in the aid allocation literature) are among the most inclusive regimes

with the largest winning coalitions relative to the population.[9] This inclusiveness should greatly dampen the fluctuations of policy saliency. If the saliency over policy concessions is a function of who makes up the winning coalition, then a larger winning coalition (for fixed population size) leads to less variation in saliency for successive regimes. Therefore, the assumption about stable preferences for the usual donors is actually grounded in the theoretical setup of the theory. Moreover, the stability of preferences not only has a theoretical basis, but also empirical support. Carroll, Leeds & Mattes (2012) estimate the effect of changes in country leader's support coalitions on the overall foreign policy of that country. They report that democratic countries' foreign policies are almost unaffected by changes in the societal groups upon the which the leader draws. Leeds, Mattes & Vogel (2009) provide a similar finding with respect to military alliance commitments.

Therefore, I believe the assumption of leader-to-leader saliency for policy concessions is well-justified for the democratic donors in my data. Once more systematic data on non-democratic donors' commitments and disbursements become available, we can start testing for whether those donors are associated with reneging in the *bargaining case* under changes in the support coalition. This is left for future research.

As just argued, saliency may be stable with respect to different configurations

[9] As well as relative to the selectorate size; see Bueno de Mesquita et al. (2003*b*).

of the donor's winning coalition, but one can think of cases in which the policy concession is only of short-lived, value. Rarely are these concessions about long-term alignment choices such as they were during the Cold War or since the beginning of the so-called War on Terror (Boschini & Olofsgård 2007, Fleck & Kilby 2010). More often, they are about limited duration, perhaps one-time, policy changes.[10] For example, when the United States wanted to use military bases in Turkey in order to better carry out the war on Iraq in 2003, the two states were bargaining over an aid-for-policy deal. As a swift, victorious military U.S. campaign against Iraq was universally expected, the value of Turkey's policy concession to the United States was merely short-lived. As many aid projects usually have disbursement schedules that are spread out over years (Roodman 2006), one might expect that the donor would renege on the commitments as soon as the utility from the policy concession is reaped. If that were the case, then aid committed in the *bargaining case* would also be associated with reneging.

Such a possibility is not consistent with my theoretical model. Recall that in the model by Bueno de Mesquita & Smith (2009*a*) as well as in the modification in the previous chapter, the recipient has the option of rejecting any aid-for-policy deal that the donor leader proposes. Even though it is not explicitly part of the

[10] I am thankful to Matt Winters for raising this point.

model, it is certainly implied that the recipient would reject any deal in which the payment is not sufficiently credible within the expected timeframe of the policy concession. Therefore, unless recipients consistently overestimate either the duration of the donor's saliency for a particular policy concession or the donor's willingness to honor the commitment, the donor should not be able to renege without losing the sought-after policy concession. Returning to the United States-Turkey example, Turkey ended up rejecting the deal; it can be speculated that Turkey may have viewed the loans to be prone to be reneged upon after the expected defeat of Iraq.

How can the donor assure that its aid package is credible? For example, the donor can tailor the duration of the foreign aid schedule to match the time for which the policy concession is needed.[11] In the case of policies with temporarily limited saliency for the donor, this might mean that the donor offers shorter aid projects or higher shares of cash and budget support aid, which are simply paid out right away. In the Turkey case, the United States had offered loans, grants, and debt relief; it stands to speculate that if the United States had offered Turkey instantaneous budget support, cash transfers, or more grants than loans, it may have obtained the rights to use the bases for the Iraq War. These novel hypotheses–bargaining over temporary policy concessions is associated with shorter duration projects and greater proportions of

[11] Note that Roodman (2006) only reported the average duration of aid projects. We still know very little about projects' durations and disbursement schedules in general.

immediate cash payments–are examined in future work.

In short, reneging should be unrelated to factors that drive democratic donors toward *bargaining* with the recipient over policy concessions. For non-democratic donors, this may not be the case if a new support coalition happens to value less the policy concessions that the previous government had bought; however, due to limitations data for non-democracies' aid giving, this hypothesis remains to be tested in future work.

Reneging in the Humanitarian Case

Turning to the *humanitarian* case now, I argue that the donor leader consistently has incentives to not release tranches of promised aid and thereby renege upon previous commitments. The leader can exploit the necessity for his winning coalition to learn about aid activities through the news. If citizens remain unaware, aid disbursements would go unrewarded by the citizens which should impel leaders to save the money and spend it domestically. Further, if the news fails to point out that reneging occurred, then the costs of reneging to the leader are slim and he should do it more. To understand how such news patterns generate incentives to renege, let's turn to the pattern of news coverage.

From the perspective of this theoretical argument, a foreign aid project has two

phases. First, it is announced and resources are set aside, and then is executed over, at times, many years by releasing funds that are put at the recipient's disposal. At each step, news coverage occurs and provides messages about the donor leader's aid activities to the otherwise unknowing public. Figure 3.1 illustrates this by providing an overview of the messages that are contained in the foreign aid news coverage in 2009 and 2010 in a random sample of aid-related articles in the *New York Times* and the *Washington Post*.[12] The figure shows the news messages about aid commitments and actual disbursement, whereas the bottom shows the fraction of articles that propose aid be and other, aid-related articles; this last category is a residual category. Even though coverage of explicit aid announcement is relatively rare in foreign aid news in general, spent aid is mentioned more often. This should not be surprising as announcements are made usually once and garner attention, whereas there can be repeated references to ongoing projects.[13] Either type of messages provide information to the citizens about their leader's aid efforts so that they can credit him (Zaller 1996). As assumed above, both types of articles should let the leader reap warm glow benefits.

This pattern is skewed even more favorably for the leader in the special yet

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[12] Figure 3.1 are the proportion estimates from a Multinomial model with a (flat) Dirichlet prior. See the appendix for details.

[13] In the coding, I assumed that references like, "The United States provided X in assistance to country Y" does indeed refer the thus-far disbursed money and not to the initial pledge.

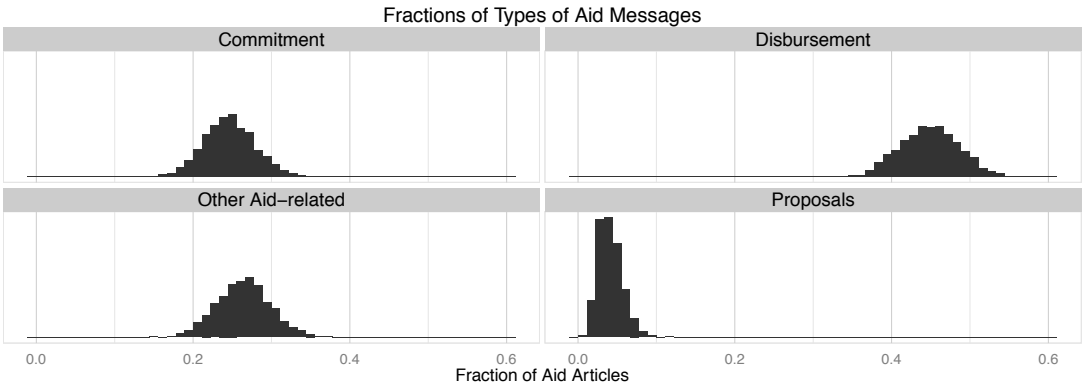

Figure 3.1 : **Content of Messages on Foreign Aid.**

important case of natural disasters elsewhere in the world and foreign aid given in response to them. Eisensee & Strömberg (2007, Figure I) show how news coverage in the United States of the disaster spikes right when a disaster happens and then quickly saps thereafter. Roughly a month after the disaster, attention has faded almost entirely.

The leader can exploit this pattern. When the attention by the media is high such as during the immediate aftermath of a disaster, the leader makes aid commitments during these times, guaranteeing that the seemingly humanitarian deeds are seen by the masses. However, as time passes and news attention wanes, the leader has incentives to renege on the commitments at the time of scheduled disbursement. This asymmetry in news attention and thereby in citizens' crediting the leaders allows the

leader to make commitments and to generate warm glow, but also incentivizes him to renege upon the original commitments. The situation is similar in the *selfish humanitarian case*. Therefore, in the *humanitarian* case, the reneging on aid promises should occur and increase in the initial promise. Finally, we should consider the role that the recipient leader can play in this as surely he does not like to forego previously promised money. He is, however, powerless in this situation. Recall that in the *humanitarian* case, the recipient leader was not asked to change his domestic policy; for him, aid was a pure transfer. Even though the full committed amount is preferable to him than the after-reneging amount, he still will not reject the deal as even less-than-promised aid is better than no aid at all. So there is no reason in my model for the recipient to reject an offer even though it is clear that some, most, or even almost all of the promised aid will go undelivered.[14]

It is worth revisiting the argument from above about whether the expected reneging may not be due to over-time changes in who makes up the winning coalition. First, whereas there is widespread disagreement within societies over the "right" taxes, etc., surveys indicate broad support for foreign aid for humanitarian purposes.[15] Therefore, the differences in saliency over the types of policy concessions

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[14] Nevertheless, recipients complain occasionally about unfulfilled promises. However, this is rare as well as such complaints are a (strict) subset of the number of articles in Figure 3.2.

[15] Specifically, surveys by the Chicago Council on Foreign Affairs since the 1970s demonstrate that respondents highly approve of aid that is believed to be helping Sub-Saharan African and

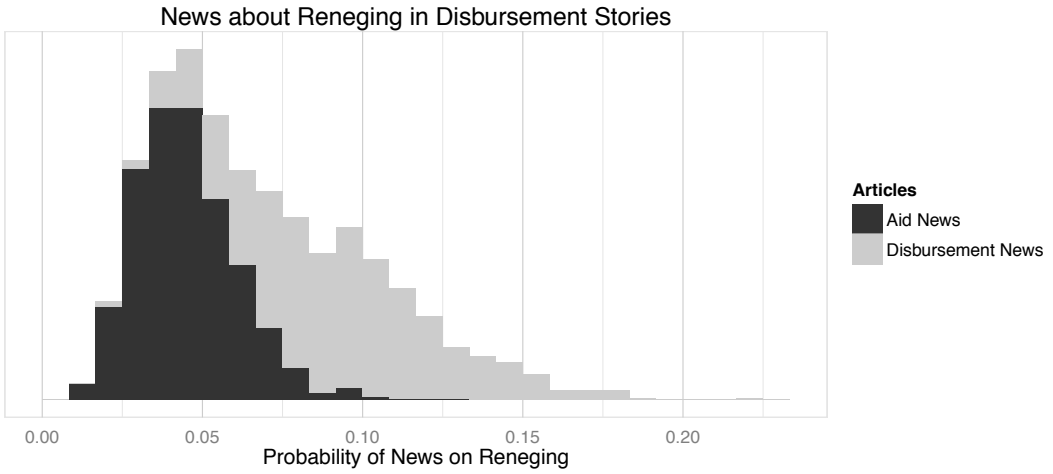

Figure 3.2 : **Proportion of Messages on Reneging among News and Disbursement.**

should have greater variation than those over the valuation over helping the poor. That said, as argued above, the fact that major donors are democracies, and in particular all of the donors in this study, these differences should matter barely here. Second, the incentive to renege in the *humanitarian* case is not driven by a change in preferences due to shifting winning coalitions, but by an assumption about what the newspapers cover. This pattern should hold without regard to who is in the winning

disaster-struck countries (Chicago Council on Foreign Relations 1975, 1979, 1983, 1987, 1991, 1995, 1999; Chicago Council on Global Affairs 2002). The Eurobarometer and several OECD surveys report responses indicative of the same pattern (Eurobarometer 1997, OECD 2003, Eurobarometer 2009). Several single-country surveys report similar results; see for Australia (AusAID 2001), for Poland (Polish Ministry for Foreign Affairs 2010), and for the United Kingdom (Department for International Development 2010). See Riddell (2007) on this topic more generally.

coalition. Therefore, reneging in the *humanitarian* case here is inherent in the logic of game and not due to changes in parameters.

Empirical Predictions

Each of the four cases has unique expectations about a donor's reneging. However, these are not yet amenable to empirical testing. The theoretical cases here present sharply demarcated scenario that do not have equally sharp counterparts in reality. Rather, one should think of them poles between which a case might lie (Heinrich 2013). For instance, if a case is mostly driven by *bargaining* between the donor and the recipient, but *humanitarian* motives matter a bit, then the prediction is not that all promised aid will be reneged upon. Further, it is likely the case that the disbursement delay factors, such as misaligned bureaucracies and hurdles to release tranches, are also at play.

The four cases offer nonetheless insights into the patterns on reneging even if reality is obviously less sharp as the theoretical cases. First, increasing saliency makes bargaining more likely, which also increases foreign aid promises and disbursements. In the bargaining case, reneging does not occur. Therefore, empirically, the saliency should be unrelated to the amount of reneging we see.

The empirical predictions are therefore that anything that makes *bargaining* be-

tween the donor and the recipient more likely should not be associated reneging. These factors are those that capture the saliency of the recipient's policy concessions to the donor's winning coalition. In contrast, factors that make it more likely that the *humanitarian* (and *selfish humanitarian*) motives drive the aid allocation also make the commitments exceed the disbursement. These are the news coverage of the recipient and the extent of the recipient's poverty. The prediction about reneging in the latter case is predicated upon the news coverage. In absence of a news increase, the reneging should not increase. Therefore, I also expect that more misery in the recipient in the absence of greater news coverage should not be associated with increased reneging.

- The donor's saliency over policy concessions should be unrelated to the amount of reneging.
- As the extent of the recipient's misery increases under high news coverage, the greater the reneging.
- The extent of the recipient's misery under average news coverage is unrelated to reneging.

3.4 Research Design

This section takes the predictions to the data. The major challenge in testing lies in the absence of data on the the amount of reneging by a donor to a recipient in a year. I will first outline my research design that uses data on disbursement and commitments in order in order test my predictions. Then, I introduce the data and the statistical model.

3.4.1 Data on Commitments, Disbursement, and Reneging

The outcome of interest is the divergence between aid commitments and disbursements for a given time period. Data on the two latter variables is available from the most commonly-used source, the OECD's Development Assistance Committee's (DAC) Creditor Reporting System (CRS). However, its data on commitments relate to the year *in* which they were announced and do not contain information about the years in which they were meant to be disbursed. A substantial part of the announced aid are multi-year commitments for projects. Therefore, the annual disbursement and commitment figures from the CRS data are not comparable from the perspective of my theory, which focuses on the relation between disbursed aid and aid scheduled for disbursement *for* a year. Therefore, the raw data from the CRS is not directly amenable to construct a measure of the degree of reneging.

Scholars' previous approaches to measuring overpromise are unsatisfactory for different reasons. First, Odedokun (2003) ignores the issue and compares the raw CRS data. For the aforementioned reasons, this approach is unlikely to produce reliable results. Second, Bulíř & Hamann (2008) use surrogate data to proxy for the donors' commitments and disbursements in a year. They use long-term loans put together in the WorldBanks Global Development Finance database. However, it is unclear how well the logic of loan commitments and disbursements correspond to the respective logic for foreign aid. Further, the authors pool the loans for each recipient so that the bilateral effects of pledging and reneging remain hidden. Last, Celasun & Walliser (2008) adjust the CRS data and assume, following Roodman (2006), that the average duration of aid projects is three years. Under that assumption, they recalculate the aid commitment data by allocating a third contemporaneously, one, and two years ahead, respectively. This approach is also not satisfactory as we know little about the distribution the duration and sizes of aid projects and in particular about whether these features covary with other factors.[16] By partitioning data in such a way, one invites bias of unknown size and direction into the study.

I propose a novel data-driven, statistical approach that links well-studied determinants of foreign aid to disbursements and commitments. The approach has three

[16] See, for example, Kilby (2011).

steps. First, simple accounting identities and a small thought experiment let me find a situation in which the announcements *in* and the commitments *for* a year would actually be the same. This is the case when the factors that give rise to the announcements were to stay the same over time. If none of the determinants change with time, then donors would announce the same amount every year. As each announcement is scheduled for disbursement in some year, it follows that the sum of commitments made for a particular year has to equal the announcement for any year. Second, this assumption is obviously not met for the raw data about disbursements as determinants change. Therefore, I will have to turn to a statistical model in order to be able to learn about the relationship between current and past determinants to current disbursement. In the third and last step, I can set the current and lagged determinants to any values and simulate comparable counterfactual cases. By varying these determinants, I can test my predictions. I will develop this approach more formally in the following.

When would the announcement *in* a year be equal to the commitment *for* a year? Let a_t and c_t be the announcement and commitment of foreign aid, respectively. Announcements are made in a particular year and are recorded in the CRS data. Fractions of each announcement get scheduled for disbursement in some year; I shall call these commitments for a particular year. Therefore, the announcement *in* a year

is decomposed into commitments for future years, which I denote as $\tilde{c}_t^{(t+k)}(x_t)$. The subscript refers to the period of the announcement, the superscript to the scheduled disbursement year, and x_t captures the factors that determine the announcement volume. Formally, it follows that $a_t(x_t) = \sum_{k=0}^{K} \tilde{c}_t^{(t+k)}(x_t)$ where K is some integer denoted the farthest distance between announcement and scheduled disbursement. Since $\tilde{c}$ is a fraction of the announcement at time t, it is the factors at time t that determine its value as well. Turning now to the commitments *for* a particular year, notice that it has a similar accounting structure. All aid committed *for* a year t, c_t, is comprised of fractions of current and past announcements; ie. $c_t = \sum_{k=0}^{K} \tilde{c}_{t-k}^{(t)}(x_{t-k})$.

The above accounting suggests one circumstance in which an announcement *in* a year is equal to the commitment *for* that year, namely when all $\tilde{c}$ are the same, ie. $\tilde{c}_t^{(t+k)}(x_t) = \tilde{c}_{t-k}^{(t)}(x_{t-k})$ for all $k \in \{0, 1, ..., K\}$. As each $\tilde{c}$ is determined by factors at the time of the original announcement, then all $\tilde{c}_t$ are equal when the determinants are the same, ie. $x_{t-K} = x_{t-K+1} = ... = x_{t+K}$. Put more succinctly, if none of the determinants that affect aid announcements change over time, then the aid announcement and the commitment for a year would be the same. In this case, the donor would announce the same amount every year and would disburse it over K years. If the announcement is unchanging from year to year, it has to follow then that the commitments for each year are equal to the announcements. I now have a

circumstance in which I can use the available data on announcements as if they were commitment data.

The assumption required so that announcements *in* a year can be treated if they were commitments *for* a year is obviously unmet in the CRS disbursement data. Disbursement is a function of what was committed for the current period from previous periods less a fraction ($\eta_k(x_t)$) due to reneging, ie. $d_t = d_t(x_{t-K}, ..., x_t) = \sum_{k=0}^{K} \eta_k(x_t)\tilde{c}_{t-k}^{(t)}(x_{t-k})$. It is obvious then that disbursement is a function of past and current determinants of aid announcements and of the incentive to renege. Hence, the raw data does not follow the assumption that I require to treat announcements and commitments as the same. A statistical model that relates current and past determinants to the current disbursement can remedy this situation. Once the model is estimated, I can set the determinants of the past and current determinants to some preset values and simulate the disbursement *as if* the determinants in the past had been the same as the present. That is, I can simulate $\hat{d}_t(x_{t-K}, ..., x_t) = \hat{d}(\tilde{x})$.

I construct the degree of reneging as $\hat{d}(x_t) - a_t(x_t)$. Using a statistical model for the announcements as well, I gain even more flexibility as I can also freely vary the $\tilde{x}$ for the announcements so that I can study the divergence between $\hat{a}(\tilde{x})$ and $\hat{d}(\tilde{x})$ for any $\tilde{x}$. In order to test my predictions, I can simply compare two different $\tilde{x}$, say $\tilde{x}'$ and $\tilde{x}''$, $\tilde{x}' \neq \tilde{x}''$, and examine how the simulated divergence between disbursements

and commitments change:

$$\left[\hat{d}\left(\tilde{x}'\right) - \hat{a}\left(\tilde{x}'\right)\right] - \left[\hat{d}\left(\tilde{x}''\right) - \hat{a}\left(\tilde{x}''\right)\right]. \tag{3.1}$$

The preceding discussion lays out how I can simulate annually comparable disbursement and commitment figures from a statistical model using the CRS data and current and lagged predictors. By varying the levels of the predictors, I can examine by theoretical predictions. To this end, I first describe the operationalizations of all predictors discussed in the theoretical section. Then, I introduce the statistical model I use to estimate the relationship between the predictors and the two outcomes. Last, I will simulate the amount of reneging as the values of the factors change to test the predictions from my theory.

3.4.2 Data and Models

The theoretical discussion above not only offers predictions about the divergence of commitments and disbursements, it also guides how to model the amounts of commitments and disbursement (ie. the x). This simulation-driven approach thus requires x_t to feature not only the variables that let me test my arguments (news, donor saliency, recipient's misery), but also the other variables that matter for the amounts of commitment and disbursements. The more accurate my statistical model

generates predictions, the less biased my tests will be. I will first introduce the operationalization for the variables that I am testing for; then I will introduce those that help me model the amounts.

First, the saliency of the donor for policy concessions is measured by a set of variables which conceptually mostly follow Bueno de Mesquita & Smith (2009*a*), but actually are used ubiquitously in empirical models of foreign aid (e.g. Neumayer 2003). I use former colonial relations and the (logarithm of the) geographic distance between the donor and the recipient. Interest in the policies elsewhere usually declines with geographic distance (Schumpeter 1942). Also, politics and policies in former colonies occupy a significant place in a donor's policy debate (Rioux & Van Belle 2005) so that changes in policies there should be more valuable. For example,Schraeder (1995) and Hook, Taylor & Schraeder (1998) write of a consensus in France for working on preserving the French linguistic and cultural legacy in former colonies. Therefore, *ceteris paribus*, aid transfers are more valuable to France if they make a former colony to increase French studies on school curricula. The data on distance comes from Gleditsch & Ward (2001) and on colonial relations from the Issues of Correlates of War Project (Hensel 2006).

Second, my theory is mostly about recipient's misery that is visible. Therefore, I rely on natural disasters in the recipient country as a measure of the extent of

misery. Specifically, I use the number of people affected by natural disasters (CRED 2011). This variable is appropriate as public opinion surveys generally demonstrate that citizens are most favorably disposed towards aid for disaster-struck countries.[17] Therefore, the variable should capture well the increased humanitarian benefits that are ascribed to the leader for giving aid.

Third, I am measuring news coverage using the data by Heinrich (2013). The collection records the number of times that a selected major newspaper in the donor country mentions each recipient country every year. These newspapers are the *Süddeutsche Zeitung* for Germany, the *New York Times* for the United States, *Neue Zürcher Zeitung* for Switzerland, the *Irish Times* for Ireland, and *Corriere della Sera* for Italy. These counts were logged and then standardized by donor (mean-centered and divided by two standard deviations) to account for uneven publication volumes by the newspapers. As demanded by the theory, the news variable is interacted with all measures of the humanitarian incentives.

With the variables of theoretical importance operationalized, let's turn to the other variables that the theory suggests matter for the commitment and disbursement amounts. These center mostly on the donor's capacity to provide and the the recipient's ability to bargain. First, the recipient country's size of the winning coali-

[17] See the citations in Footnote 15.

tion is usually measured using the measure proposed in Bueno de Mesquita et al. (2003*b*). However, I only have one of its subcomponents available until 2004 so that my study would cover only a small number of years. Instead, I will proxy the difference between a large and a small winning coalition by looking at democracies and non-democracies as measured by the Polity2 variable. I use a dummy which is equal to one if the Polity2 variable is above six. Second, I calculate the available resources to the recipient and donor governments by using the respective data on governments' share of gross-domestic product (GDP) multiplied by the GDP, which is subsequently logged; data comes from Penn World Table (Heston, Summers & Aten 2011). Last, I include a third-order polynomial of time as well as a full set of recipient and donor dummies to account for temporal and cross-sectional heterogeneity.

The data on commitments and disbursements comes from the OECD DAC Creditor Reporting System (CRS). Coverage is often a problem for data on foreign aid as the CRS records donor-reported foreign aid. If donors do not provide appropriate information, such aid is missing from the CRS. To ensure high data quality, I construct my panel by only using donor-years with data coverage above 90% for disbursement and commitments. This metadata on coverage comes from the CRS as well. Further, some donors' commitment data are not commensurate with the OECD criteria to evaluate coverage; I drop therefore Canada, Portugal, Spain, and the United King-

dom.[18] However, available data on news coverage reduces the number of donors to Germany, Ireland, Italy, Switzerland, and the United States.

It merits emphasis that, even though I am relying on disasters as my measure of recipient's misery, I do not use humanitarian aid or emergency aid solely. For all my analyses, I use Official Development Assistance (ODA) figures, which includes all aid intended for economic development and welfare of the recipient.

My simulation approach rests upon a statistical model that links current and past factors to current aid disbursements. Therefore, I need to include lags of all predictors in the model for aid disbursements. Two further issues arise. First, my theory does not tell me the number of lags to include for each predictor. Second, some predictors vary only mildly over time and are therefore strongly correlated. Commonly used estimators have problems with high correlation as coefficients reflect only unique variation. Both issues are dealt with by using a statistical model that performs variable selection as part of the estimation (Hastie, Tibshirani & Friedman 2009). Specifically, I use an elastic net which, crudely speaking, divides the covariance equally between the variables. This property of the estimator mitigates the usual

[18] This leads to the following donors (and the earliest year they enter my dataset): Australia (2001), Austria (2001), Belgium (1999), Finland (2006), France (2005), Germany (2003), Greece (2004), Ireland (2002), Italy (2004), Japan (2003), Luxembourg (2003), Netherlands (2001), New Zealand (2004), Norway (2005), Sweden (2006), Switzerland (2002), and United States (2002).

loss in efficiency that is well-known for regular linear regression models. At the same time, the estimator "punishes" large coefficients if the data does not clearly support them. Therefore, coefficients on irrelevant, noisy lags of predictors get shrunk towards zero. In short, I let the model sort out how much weight ought to be given to particular lags while at the same time not "losing" the covariance.[19] To this end, I use a Bayesian linear regression with elastic net priors on the coefficients. I rely on the formulation and Markov Chain Monte Carlo algorithm developed by Kyung, Gill, Ghosh & Casella (2010).

The disbursement and commitment models were each run for 10,000 iterations as burn-in and then for another 20,000, saving every second draw. Convergence was assessed by examining the Geweke statistics, autocorrelation plots, and traceplots, which are shown in the appendix.[20]

3.5 Results

With the large number of parameters, separate models for commitments and disbursements, logarithmically transformed and subsequently mean-centered outcome

[19] I exclude the lags for variables that do not change with time. These are: geographic distance, colonial relations, and the dummy for Sub-Saharan African countries. All other variables are included with their contemporaneous values as well as four lags.

[20] I estimated a total of 16 hyperprior specifications for the amount of shrinkage. The results are substantively very similar to what is presented below. All figures produced from these alternative models are available from the author.

variables,[21] several lags of predictors, and as the quantity of interesting is the change in the commitments minus the disbursements, the substantive interpretation of the parameters is difficult. Further, as I am using a Bayesian approach, the uncertainty of all estimated quantities should be acknowledged as well. To overcome these difficulties, I rely on graphical summaries of substantively interesting quantities of interest (King, Tomz & Wittenberg 2000, Kastellec & Leoni 2007) and relegate the posterior summaries of the parameters themselves to the appendix. Specifically, I compare the amount of reneging for two different levels of the predictor(s) (such as geographic distance or news coverage) as outlined in Equation 3.1, while holding all others at their median or modal values (for binary variables). As I am using all after-burn in draws, I obtain posterior distributions of the quantities of interest which naturally accounts for the estimation uncertainty. I summarize them by reporting the 50% and 90% central credible intervals as well as the median.[22]

Let's now turn to examining the results to assess whether the reneging changes as predicted by my theory. They are shown by groups of variables as they appear in my theoretical model, which are *bargaining* determinants and *humanitarian* incentives.

Figure 3.3 shows reneging by whether the donor and the recipient shared a colonial

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[21] The latter step is done for estimating purposes (Kyung et al. 2010).

[22] The estimation was carried using the logarithmic transformation of commitments and disbursements. To facilitate the substantive messages, I transform all values back to the original scale in 2009 constant U.S. dollars.

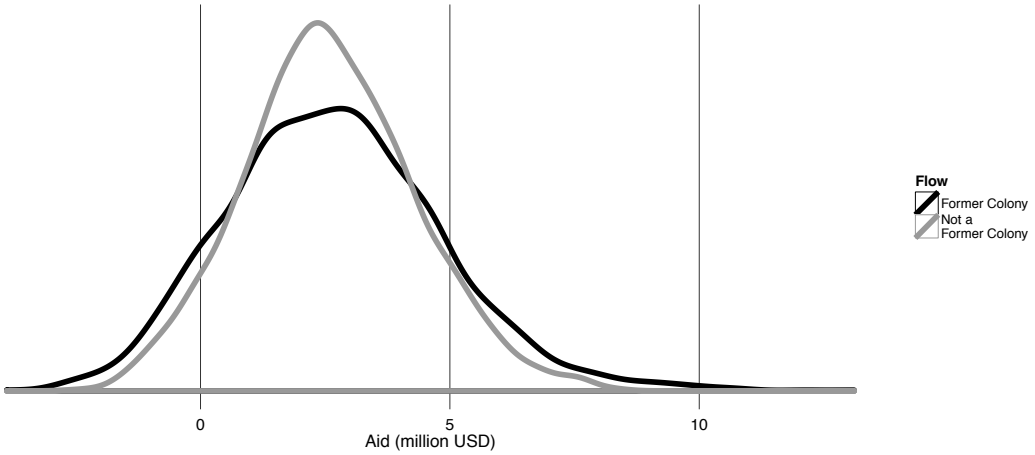

Figure 3.3 : **Change In Reneging by Colonial Status.** The black density shows the simulated amount of reneging (in million U.S. dollars) if the donor and recipient share a colonial past; the gray densities is for the case when there was a colonial history.

relationship. The black density depicts when they did, the gray when they did not. As expected by the theoretical arguments, the amount of reneging does not change between the two cases. Assuming average values for all other covariates in the commitment and disbursement models, the average reneging is about 2.5 million U.S. dollars in either case.

The second operationalization of saliency is the geographic distance between the donor and the recipient country. In Figure 3.4, the simulated amount of reneging is graphed against distance (in kilometers), going from the lowest observed value to roughly the median distance. The gray and black polygons show the 90% and 50%

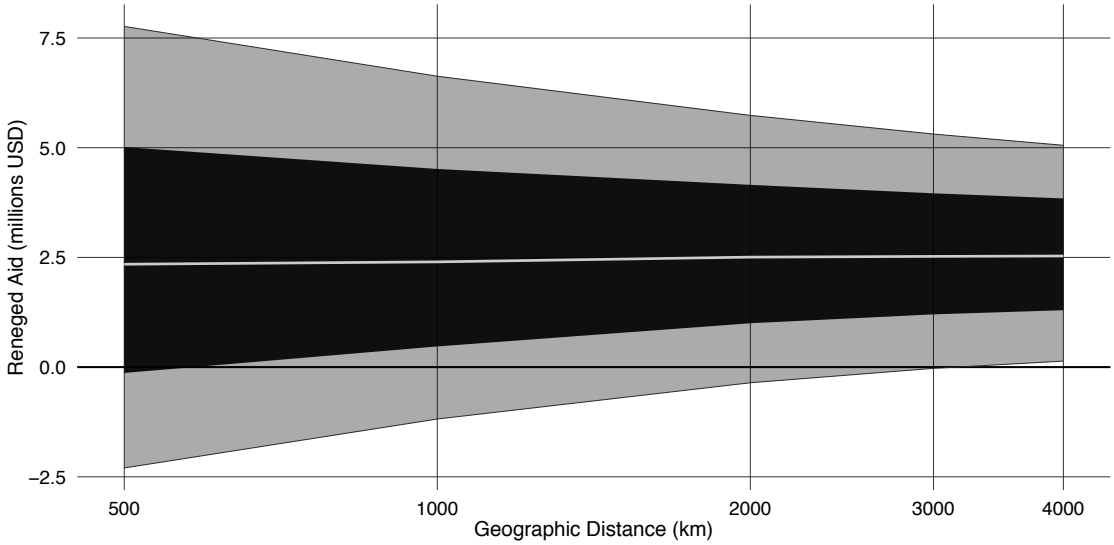

Figure 3.4 : **Reneging by Geographic Distance.** The abscissa shows the distance between the donor and recipient in kilometers; the ordinate gives the amount of reneged foreign aid in millions USD. The central line gives the median estimate, the black polygon the central 50% credible interval, and the gray polygon the 90% central credible interval.

central credible intervals, respectively; the line on the black polygon indicates the median estimate. Again, as predicted by the theoretical arguments, the amount of reneging does not change. Across the simulated values, as distance decreases (and thereby saliency increases), the actual reneging does not change.

Whereas I predicted no relationship between *bargaining* variables and reneging, the *humanitarian* variables interacted with the news coverage are expected to increase reneging.

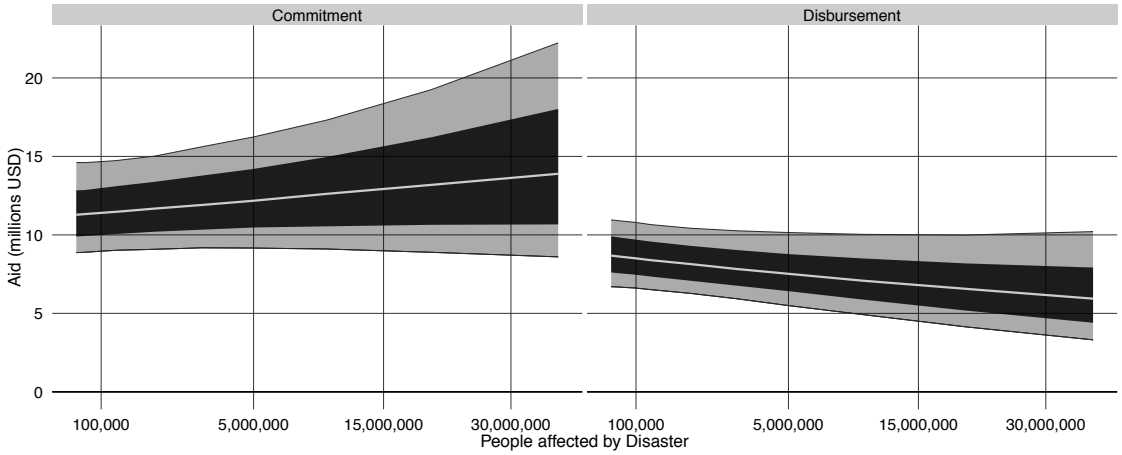

Figure 3.5 : **Commitment and Disbursement by Extent of Disaster under Heightened News.**. The left hand panel shows committed foreign aid, whereas the right hand panel the actually disbursed aid; each is depicted along the ordinate. The abscissa gives the extent of people affected by natural disasters. For an explanation of the polygons and the central line, see the caption to Figure 3.4.

Figure 3.5 shows the aid commitments (left) and disbursements (right) as the extent of a disaster in the recipient country increases and when there is heightened news coverage (ie. news coverage is a standard deviation above its mean). Looking the commitments, we see a (slight) upward trend associated with more disaster. Particularly, the higher percentile regions of the simulated density increass stronger. In contrast, the actual disbursements decrease slightly as the extent of the disaster widens. Their difference, that is, the degree of reneging, is shown in Figure 3.6. As there are more than roughly 200,000 people affected by disasters and when the media

pays attention, the donor starts reneging increasingly more.

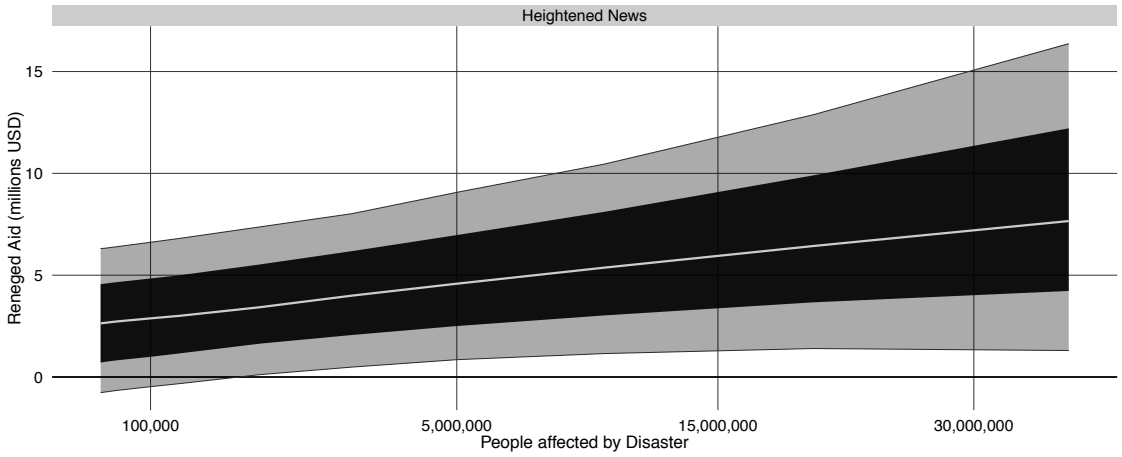

Figure 3.6 : **Reneging by Extent of Disasters, Heightened News Coverage.**

My expectation that increasingly harmful disasters lead to more reneging is predicated on there being sufficient news coverage. Figure 3.7 replicates Figure 3.6 while setting the donor's news coverage of the recipient to the mean. In this situation, when news coverage is substantively lower, then the increasing extent of disasters in the recipient countries are no longer associated with increased reneging. Instead, reneging stays flat at around 2.5 million U.S. dollars.

Overall, my statistical results largely comport with the expectations from the theoretical model. Mostly, when states are *bargaining* with each other over policy concessions, increasing saliency for policy concessions by the recipient are not associ-

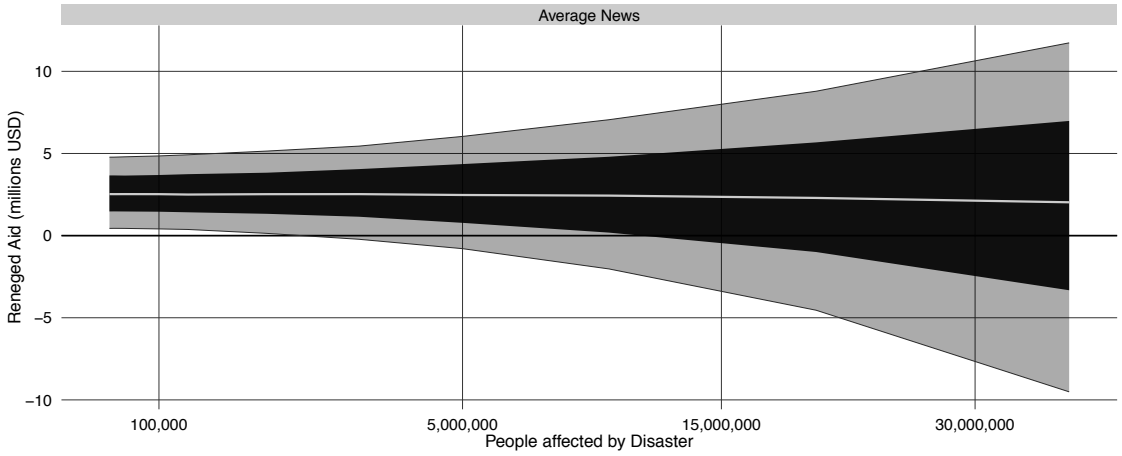

Figure 3.7 : **Reneging by Extent of Disasters, Average News Coverage.**

ated with changes in reneging. However, as the recipient appears more in misery to the population of the donor country, commitments increase, disbursements decrease, and thereby reneging becomes more extensive. As predicted though, this does not occur when the awareness in the donor country is low.

3.6 Conclusion

Overall, I find support for my predicted pattern of reneging on foreign aid commitments. That is, factors that lead to more foreign aid due to aid-for-policy deals (ie. *bargaining* between the donor and the recipient) are generally not associated with reneging; however, as *humanitarian* motives matter more, then the extent of reneg-

ing increases if there is heightened news coverage. The evidence is supportive of my contention that reneging is not only a bug in the foreign aid system, but actually one of its features.

Scholars have focused the most on what determines the amount of disbursed foreign aid. However, the amount is only one of many features in the design space of foreign aid. This paper expands upon this by simultaneously studying the public commitments over aid and the release of these funds over time. In this paper, I ask a question that has received little attention: what is the optimal *political* design of foreign aid? For example, aid that is disbursed comes in many variants. Foreign aid can be tied or untied, can come as a cash transfer to the receipient, to only a specific ministry of the recipient, or can be a project. If it is a project, how is its location chosen? Scholars and development activists have long preached the advantages of untied aid, but little scholarship exists into what gives rise to aid being untied. With some notable exceptions (Winters 2010, Bush 2011, Dietrich 2012), very little research exists that explains these features of foreign aid design.

This paper uses a theory that centers on the aid-for-policy logic and humanitarian signaling. However, there are at least two other strands in the foreign aid literature that could serve as the basis to theorize about the differences between commitments and disbursement of aid. In one strand, aid allocation is driven by bureaucratic

interests and inertia (e.g. Lumsdaine 1993, Van Belle, Rioux & Potter 2004, Carey 2007). In another body of literature, scholars examine the political economy of legislative voting on foreign aid (e.g. Fleck & Kilby 2001, Milner & Tingley 2010, Powers, Leblang & Tierney 2010, Berger 2012). From either view, the decisions about aid are less leader-centric and less top-down than what I proposed. It is beyond the scope of this paper to propose and examine arguments on the politics of overpromise from these three angles, but it is the hope that rival theories to mine emerge so that the relative explanatory power can be judged (Kass & Raftery 1995, Clarke 2001, Clarke & Primo 2012).

3.7 Appendix

3.7.1 Robustness Checks

This section checks the robustness of the estimates in the text with respect to priors as well as the covariates.

In the following (Figures 3.8 through 3.11), the different hyperpriors are denoted by a four-digit tag. The first two digits refer to r_1 and r_2, the latter two to δ_1 and δ_2. These correspond to the parameters of the same name as used by Kyung et al. (2010) in their Bayesian elastic net model (section 2.5 in their appendix).

A digit "1" in the tag means that a value of 1 for the corresponding parameter was used; a digit "2" indicates the use of 10 for the parameter.

"Spec 1" refers to the covariate specification that was used in the paper, which includes a full set of dummy variables for each donor and for each recipient. "Spec 2" is without these country-specific variables.

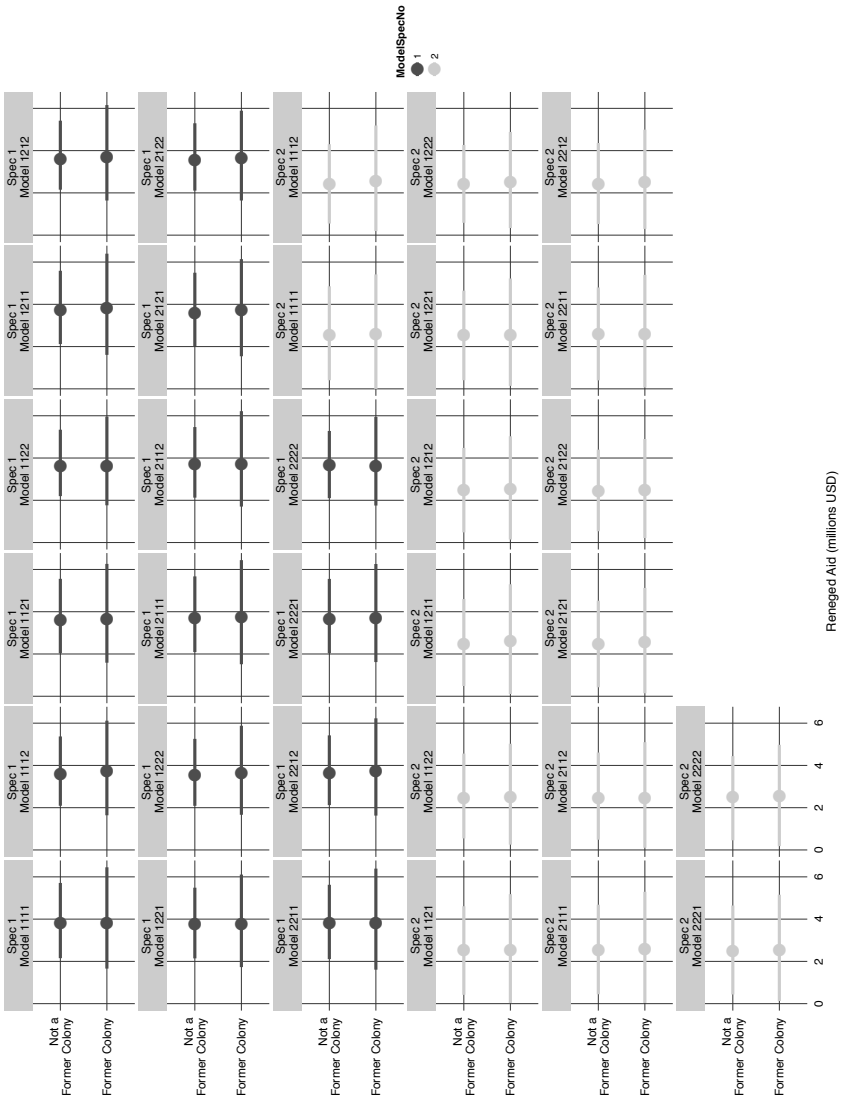

Figure 3.8 : **Reneging and Former Colony Robustness.** Each panel in the figures replicates Figure 3.4 under alternative model assumptions. In each panel, abscissa shows the amount of reneging whereas the ordinate indicates the different cases. Each ot gives the median estimate, each line the 90% central credible interval. Gray dots and lines are for the second model specification, whereas the black ones are for the main specification.

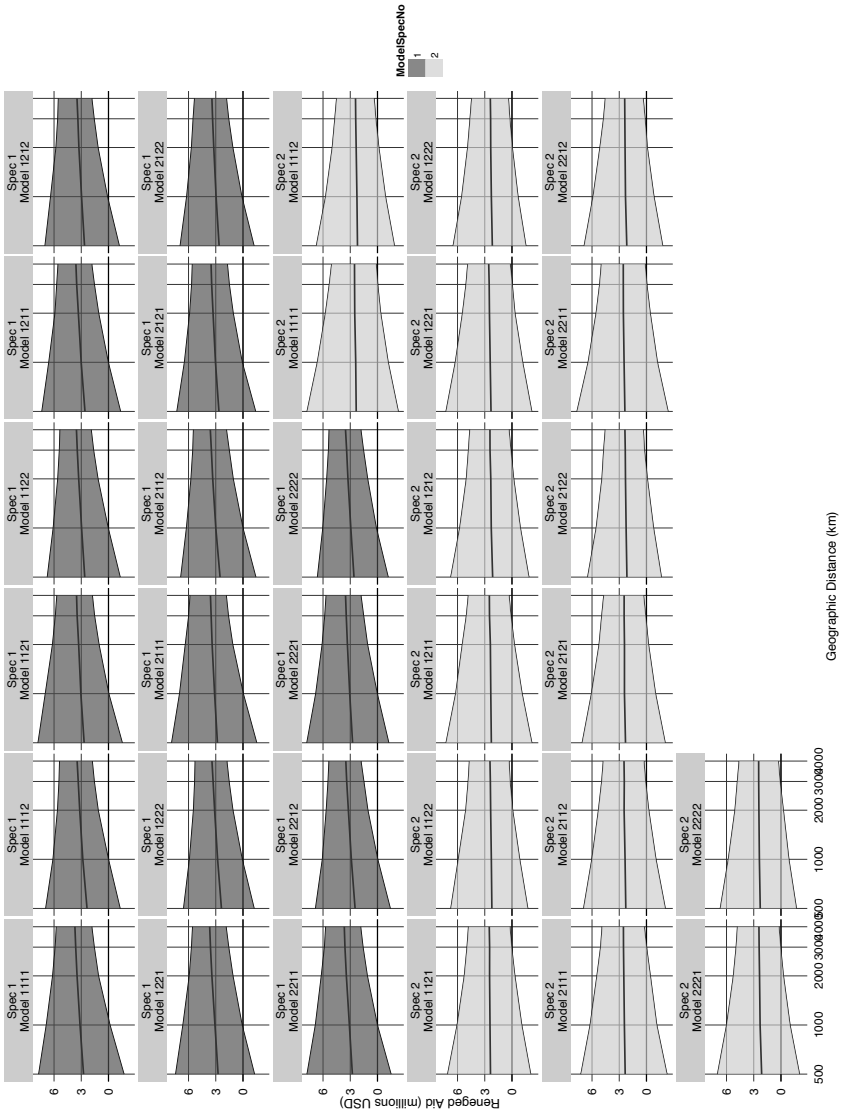

Figure 3.9 : **Reneging and Distance Robustness**. This figure is a robustness check for Figure 3.4. For details, see the caption to Figure 3.8.

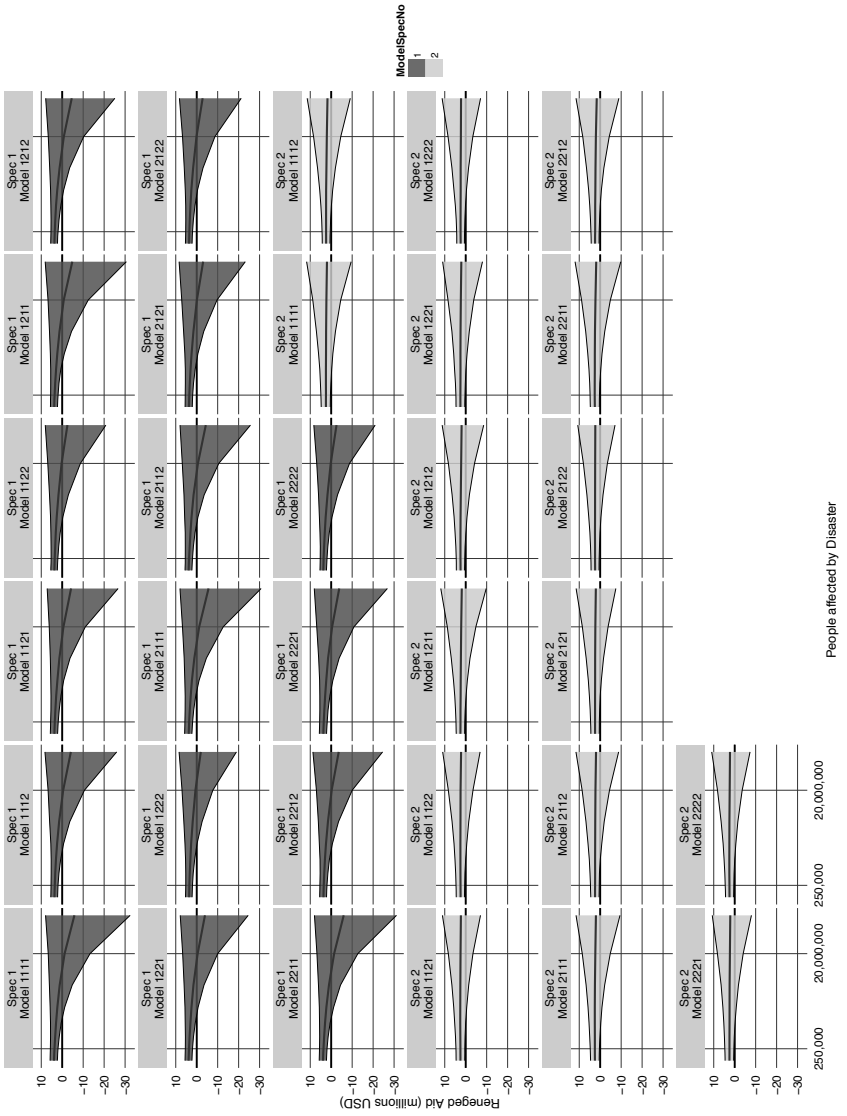

Figure 3.10 : **Reneging and Disasters (High News) Robustness**. This figure is a robustness check for Figure 3.6. For details, see the caption to Figure 3.8.

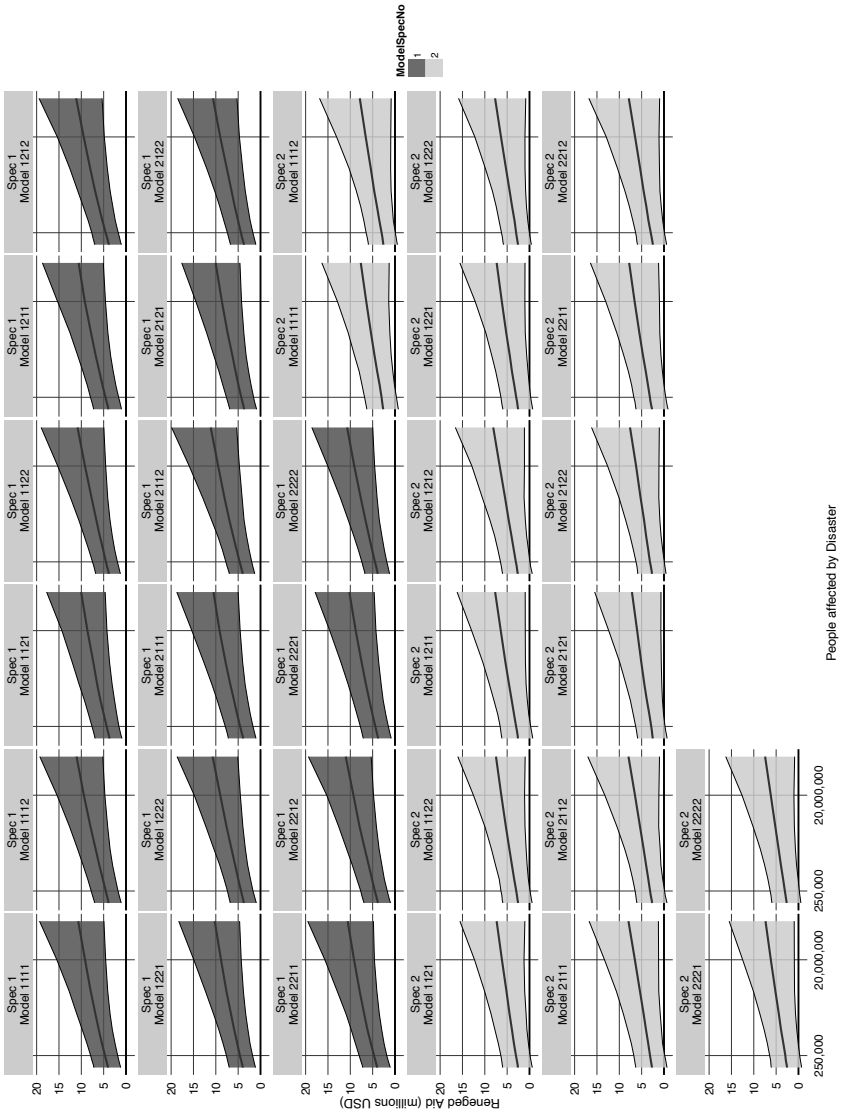

Figure 3.11 : **Reneging and Disasters (Average News) Robustness**. This figure is a robustness check for Figure 3.7. For details, see the caption to Figure 3.8.

3.7.2 Newspaper Content Coding

I obtain all news stories on foreign aid published in the *News York Times* and *Washington Post* in 2009 and 2010 via Lexis Nexis. Specifically, I looked for articles involving the United States and that included anything about development aid, foreign aid, development assistance, USAid, aid commitment, or aid pledges. This gave a total of 1,873. I randomly coded 100 articles per year and per newspaper. For each article, the following variables were coded. The word in italics denotes the variable name. "NA" denotes missingness.

- *Date* of the article
- *Newspaper* in which the article appeared
- *Title* of the article
- *Type* of the article (e.g. news article, op-ed, editorial, interview, etc.)
- Was new development aid or funding *Commit*ted?
- The variable *CWho*[23] captures the high-ranking person to have made the commitment (e.g. president, USAid administrator). If the article invokes a state-

[23] "C" stands for commitment.

ment by an aid agency without further specifics, then just the agency is listed. If *Commit*=0, then *CWho*=NA.

- Was there an *Event* at which the commitment was made public? An event can be the G7/G8 meetings, the UN General Assembly meetings, at a U.S. secretary's visit to the recipient, etc. If *Commit*=0, then *Event*=NA.

- Who was/ were the *Recipient*(s)? If *Commit*=0, then *Event*=NA.

- *CWhat* is the commitment supposed to be used for? The variable records the intended projects, such for education, health, etc. If *Commit*=0, then *CWhat*=NA.

- Was already *Disburse*d development aid mentioned?

- The variable *DWho* captures the recipient nation of the disbursement. If *Disburse*=0, then *DWho*=NA.

- Did the article mentioned that the donor had not lived up to previous commitments? Was there any *Shortfall* reported? If *Disburse*=0, then *Shortfall*=NA.

- *DWhat* was funded? The variable records the intended projects, such for education, health, etc. If *Disburse*=0, then *DWhat*=NA.

- Did the article *Propose* something about aid? This can mean two things: First, some prediction about a future policy was made. Second, the article could be normative and state particular aid projects ought to be implemented. If *Disburse*=1 or *Commit*=1, then *Propose*=0.

- Did the article about *OtherAid* related matters, such as new technologies, other donors, etc.? If *Disburse*=1, *Propose*=1, or *Commit*=1, then code this field.

For Figure 3.1, I dropped all articles with *Wrong*=1 and sum the realizations for *Disburse*, *Commit*, *Propose*, and *OtherAid* as a, b, c, and d, respectively. These reflect the messages and technically not the number of articles; 17% of the articles contain disbursement and commitment messages. I estimate the proportions of the messages in the aid articles through a multinomial model. After assigning a (flat) conjugate Dirichlet prior distribution, a *Dirichlet* $(\alpha = (1 + a, 1 + b, 1 + c, 1 + d))$ posterior distribution follows. The densities in Figure 3.1 summarize the characterize the proportion estimate.

The estimation of the share of reneging messages among all news stories and only disbursement stories, respectively, proceeds by using a Binomial model. Let e be all stories in which the donor was reported to have reneged on a commitment. Assigning a (flat) Beta prior, the resulting posterior is a $Beta(1+e, 1+a+b+c+d)$ distribution when considering all aid news stories and $Beta(1 + e, 1 + b)$ when only looking at

disbursement stories. Figure 3.2 are the histograms of the posterior draws.

Chapter 4

Does Foreign Aid Cause Governmental Killings?

4.1 Introduction

It is by now a widely accepted notion that politicians seek to hold on to their office (Bueno de Mesquita et al. 2003*a*, Mayhew 2004), which they seek to achieve by multitude of means. These come in familiar variants, such as traveling to tend to their constituents (Fenno 1978), visiting battleground states, and fundraising (see for example Bartels (1985) and Doherty (2012)), and tailoring policies to their constituents (e.g. Bickers & Stein 2000).

History suggests that the use of violence is certainly not beyond politicians (Pinker 2011). For example, diversionary theory suggests that governments facing domestic woes may initiate violence elsewhere to divert attention (Ostrom Jr & Job 1986, Chiozza & Goemans 2011). However, such violence need not be directed at people elsewhere. Repression and genocide are most often explicitly aimed at people within the politician's country (Harff 2003, Davenport 2007).

Leaders seek to retain their office in order to accrue the benefits and are not

above using violence to this end. Yet, as governmental violence is not ubiquitous, its use cannot always be the best action. Further, whereas leaders should generally prefer being in office over leaving it, the relative value for holding it differs across cases.

This chapter considers how receiving foreign aid affects the relative propensity of governments to act violently in order to maintain power. The focus is on how foreign aid affects the (relative) value of holding office and how it modifies the decision to use violence against citizens. The research question is thus whether foreign aid causes governmental killings.

Why should we focus on foreign aid? A quick glance across the literature on development countries suggests two central observations. First, these countries have a higher conflict propensity (Collier 2007, Blattman & Miguel 2010), and second they receive much of the foreign aid in the world (Easterly 2009, Wright & Winters 2010, Tierney, Nielson, Hawkins, Timmons Roberts, Findley, Powers, Parks, Wilson & Hicks 2011). Even though this observation is purely correlational, it turns out that some simple reasoning stemming from the rich literature on the political economy of governance leads directly to a causal link from foreign aid to violence. This suggests an affirmative answer to the research question. Assuming that killing people who vie for the incumbent's office makes the incumbent's political tenure safer, then killing

citizens is an attractive option for the government. However, this tenure-assisting benefit does not come freely, as killing people also rattles the productive sector of the economy. This is the case as, for one, killing people literally removes workers and thereby economic output and tax revenue, and, for the other, killing signals a tumultuous landscape which tends to keep investors away(Blanton & Blanton 2007). Either ramification shrinks the pie which the incumbent can appropriate.

Foreign aid, however, may dampen the link between killings and the adverse consequences thereof. As a country receives more foreign aid, the importance of labor, taxes, and foreign investment to the economy flags, and thereby the negative economic consequences of possible governmental killings decrease. Therefore, *ceteris paribus*, governmental killings should be more likely to occur as reliance on aid increases.

Whereas the focus is on governmental killings, the argument is broader. The explanatory locus of the theoretical argument is not that killings result in death, but they render opponents unable to challenge the office-holder. However, there are other policies that work equivalently, such as imprisoning and disappearing people. I shall call this class of actions "removals." It is distinct from other policies, such as bribes (Dal Bó 2007, Finan & Schechter 2012), the pursuit of "sound" policies to make people happy (Bueno de Mesquita et al. 2003*a*), or political cooptation

(Gandhi 2008, Bueno de Mesquita & Smith 2009*b*) as removal does not seek to placate an opposing actor, but to render him unable to threaten the incumbent politician.

This chapter provides an estimate of the causal effect of receiving foreign aid on the propensity of a government to not only kill its citizens, but also to disappear and imprison them for political reasons. I find that, surprisingly, receiving aid has either a negative or an essentially zero effect on whether recipients of foreign aid engage in the removal of citizens from political life.

Obtaining causal effects from observational data is far from trivial. The most credible evidence could be obtained through a randomized controlled experiment but for obvious reasons such an approach is neither feasible nor ethically desirable. Hence I have to turn to observational data. I confront the difficulties in estimating a causal effect from observational data by using an estimator that allows me to draw on the considerable previous research on the causes of foreign aid allocations as well as on the causes of governmental killings. Specifically, I will turn to Bayesian Additive Regression Trees (BART) as introduced by Chipman, George & McCulloch (2002, 2007, 2010), who are referred to as CGM henceforth .

This paper will first derive more rigorously the prediction that aid causes governments to remove citizens from political life with higher probability. To this end, I

will resort to the formal model by Esteban, Morelli & Rohner (2010) who show how natural resources affect a government's propensity to engage in mass killings. I use the often-assumed budgetary equivalence between natural resources and foreign aid (Smith 2008, Morrison 2009) to argue that their theoretical results apply directly to the research question of this paper. Next, I will outline my approach to estimating a causal effect from observational data using BART. Subsequent sections of the paper present the results and offer a discussion of them.

4.2 "Free Resources," Aid, and Governmental Killing

Before proceeding to formally studying how aid affects killings specifically and removals generally, it is worth considering what the central explanatory loci of such a model should be. I propose that there are two such desiderata. First, the model needs to allow for a government to decide whether (or to which extent) to use resources to reduce the number of another actor that is vying to run the government. Obviously, without such a possible action, one could not offer insights into the research question. Second, a country's foreign aid needs to affect the available resources. This budgetary feature of aid is widely accepted by foreign aid scholars (Remmer 2004, Morrison 2009, Bueno de Mesquita & Smith 2010*a*).

The formal model by Esteban, Morelli & Rohner (2010) already comports with

these desiderata. Specifically, the authors of the model seek to explain the onset of governmental (mass) killings against citizens.[1] They directly study the decisions of an incumbent who seeks to hold onto power and to extract as much as possible from the governmental resources. There is a second group which struggles to occupy that role. The incumbent seeks to prevent this group from being victorious. One option in his toolbox is to undercut the opponents' fighting strength by reducing the number of active members in the opposition group. Whereas such an action can have many manifestations within the class of removal actions, for style's sake, I will provide argument using killings as the policy.

I will first review the model by Esteban, Morelli & Rohner (2010), and then examine the propositions it makes about the resource base and governmental violence. The authors present their hypotheses with respect to natural resources as part of "unearned income." Subsequently, I will argue that their results apply to foreign aid as well.

The game in Esteban, Morelli & Rohner (2010) features two groups vying for control of the government and its decision-making apparatus. Successfully holding the government is beneficial to a group as the statal apparatus allows for the redistribution of resources and can be used to carry out the killing of the opposition. The

[1] See Gregory, Schröder & Sonin (2011) and Conrad & DeMeritt (2013) for related arguments.

gain from killing people is that smaller transfers have to be made which means that the incumbent gets to keep more resources. The government obtains all its resources from tax revenue from the citizens' labor (under an exogenous tax rate) and from the sale of natural resources; the entire governmental budget gets redistributed to the citizens albeit possibly unevenly. The game unfolds as follows: At the first stage, the incumbent and opposition groups choose to invest into their fighting abilities. If fighting occurs, the victor becomes the new incumbent and runs the government; if there is no conflict, then the incumbent group remains in power. At the last stage of the game, the winner decides how many people of the opposition group to kill and sets the new policy of budget transfers.[2] The main objective of the actors to appropriate as much as possible from the statal resources.

Of central importance to this chapter is the the strategic murder of the opposition by the incumbent which may occur at the last stage of the game.[3] It has two effects on the incumbent group at that stage. First, killing people reduces the future fighting capabilities of the opposition such that the incumbent group can more safely secure a greater part of the statal resources in this period. This is the case as there are fewer

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[2] It is possible that there is a some minimum share less than which the incumbent group cannot redistribute; see Esteban, Morelli & Rohner (2010, p. 13).

[3] I will not characterize the full equilibrium of the game as the equilibrium levels for the fighting efforts are not of interest per se in this paper. It suffices to note that the optimal choice for the number of people to kill is independent of any history of the game (Esteban, Morelli & Rohner 2010, p. 14).

people such that there is less after-tax income that could be spent on future fighting efforts. By killing members of the opposition group, the incumbent can undercut the future resources of the other group. Second, if there are fewer people in the state, then there is a smaller tax base and thus less tax revenue that gets extracted. That leads to smaller statal resources and thus less money that can be redistributed. The incumbent group likes the first effect, but obviously dislikes the latter.

Consider now the effect that natural resources have on the choice of the number of people to be killed. First, they do not affect how the killing reduces the future fighting ability of the opposition. Thereby, they also do not influence how little the incumbent has to redistribute to the opposition. However, *ceteris paribus*, natural resources increase the total resources that can be appropriated by the incumbent. Second, natural resources lessen the negative consequences from killing people on the tax base. If they make up a greater proportion of the budget, then a given loss in tax revenue after killing a number of people is less consequential. These insights drive the model's central results for governmental killings. In the presence of natural resources, killings by the government become more likely as it expands the range of parameter values for which the optimal number of killing people is greater than zero.[4] This happens because natural resources reduce the negative effects of a smaller tax

[4] Respecting a nuance of their model, if the parameter values make a complete extermination of the opposition the optimal choice, then an increase in "unearned income" does not change the probability of mass killings; see Esteban, Morelli & Rohner (2010, 3.2).

base from there being fewer people.

Esteban, Morelli & Rohner (2010) formulate their model and discuss the results with reference to natural resources. More precisely, they use a theoretical variable which is set up to be distinct from tax revenue in that it constitutes revenue independent of the number of people and the level of taxes. Smith (2008) dubs this part of a government's budget "unearned income." Smith, Bueno de Mesquita & Smith (2010*a*), Ahmed (2012), and, most prominently, Morrison (2009) assume that there is an equivalency between natural resources and foreign aid in that both are "unearned income," which would suggest that the results by Esteban, Morelli & Rohner (2010) would seamlessly apply to foreign aid's effect on governmental killings as well. I will argue that this is the case but only after a detour in the argument.

Can we treat foreign aid as "unearned income," as equivalent to natural resources in a straightforward way? Such an interpretation does not square with a prominent strand in the theories of foreign aid. Even though I will argue that the answer ends up being affirmative, we need to pause and consider the argument. Recent work on foreign aid presents a "political economy" of it (Bueno de Mesquita & Smith 2009*a*) in which aid might be "unearned," but is not free for the recipient. Building on the view by Morgenthau (1962), Bueno de Mesquita & Smith (2009*a*) see aid as a bribe to the recipient government such that it does something it would not otherwise do

and that is to the donor's liking. If the recipient has to incur some cost in order to obtain aid, then aid does not come freely to the recipient as do the natural resources in the model by Esteban, Morelli & Rohner (2010). In that sense aid is neither free, nor "earned" through taxation.

Does "unearned" but not necessarily "free" aid affect the result on the recipient's propensity to kill citizens? First, the increase in the statal resources remains. Even though the recipient may have to incur some cost in order to obtain aid, aid still adds to revenue obtained through tax and thus increases the budget, thereby making the budget less dependent on taxation. Second, the result that the recipient obtains aid necessitates that some cost was incurred. Bueno de Mesquita & Smith (2009*a*) model the cost of a policy change by the recipient as a fixed cost of variable salience. This cost of a policy change should not affect the central result. For one, there is no reason to presume that the cost affects the revenue from taxation and would thereby undo the monetary effects of aid. For the other as postulated by Bueno de Mesquita & Smith (2009*a*), the aid-for-policy deal has to be beneficial to *both* countries when it occurs. If the recipient was not going to benefit from the increased resources, it would never have agreed to the deal in the first place. *Eo ipso*, getting aid implies that the recipient benefitted from it in that aid augments the available resources. The view that aid is one part of an aid-for-policy deal may suggest that aid is not

free, but its effect on lessening the dependence on taxes remains and therefore should contribute to the decision to kill people.

Whereas Bueno de Mesquita & Smith (2009*a*) model that the logic of aid-for-policy models apply every time, this need not be the case. In Chapters 2 and 3, I argue and demonstrate that donors do not always ask for a policy change in return for aid. Such aid that is "free" as well as "unearned" happens when the donor cares little about any policy that is under the recipient's control. It is well known that the donor's own supporters prefer seeing poorer countries be helped (Lumsdaine 1993, Page & Bouton 2006, Riddell 2007). At the margin, even in the absence of a policy of interest, the donor leader should still want to help more destitute countries if this gets honored by those that keep the leader in power. However, this is not as straightforward. People tend to know very little about foreign aid and can in most cases not assess how much the donor leader helped a poorer country. Knowing that, the donor leader has no incentive to help out if no-one knows about it. A large body of work shows that people can be aware of foreign policy decisions which allows them to judge the leader's performance on foreign aid. This can happen under identifiable circumstances, namely when the media directs attention to plight of other countries. This is reflected in the large number of studies that have shown a close connection between media coverage and the amount of foreign aid that is provided.

(Payaslian 1996, Van Belle 2003, Van Belle, Rioux & Potter 2004, Drury, Olson & Van Belle 2005, Strömberg 2007, Potter & Van Belle 2009). If aid is solely given to placate caring supporters without an interest in seeing policy changed, then aid is actually "free" as well as "unearned" revenue for the recipient and should have the effects predicted by Esteban, Morelli & Rohner (2010).

4.3 Empirical Analysis

In this section, I provide an estimate of the treatment effect of foreign aid on the government's propensity to kill citizens as well as on the use of other means to remove citizens from political life. First, I introduce the operationalizations of the key variables (outcomes, treatment, confounders). After that, I outline the intuition behind the estimator, BART, to obtain the causal quantities. As BART is a relatively recent innovation and has barely been used by political scientists or scholars of foreign aid, its merits and workings will be discussed.[5]

4.3.1 Data & Variables

The outcome of primary interest is the recipient government's use of domestic killings. I operationalize this concept through two variables. First is the dichotomous indica-

[5] The small number of uses include Green & Kern (2012) and Kourtellos, Tan & Zhang (2007).

tor by Harff (2008) which assesses whether there was a genocide or politicide ongoing in a given country in a year.[6] Such an event is defined in the data set when "authorities physically exterminate enough (not necessarily all) members of a target group so that it can no longer pose any conceivable threat to their rule or interests."[7] Operationally, the governmental authorities' complicity in the deeds must be established, the actions must be part of a pattern and not a one-time event, and the victims be unarmed civilians. This largely matches how Esteban, Morelli & Rohner (2010) model the governmental killings.

I use a second operationalizations using "extrajudicial killings" by the government as coded as part of the Cingranelli-Richards (CIRI) human rights data project (Cingranelli & Richards 2010). The variable codes in an ordinal manner the murders by government officials without due process resulting from "deliberate, illegal, and excessive use of lethal force by the police, security forces, or other agents of the state whether against criminal suspects, detainees, prisoners, or others." This is somewhat looser than Harff's coding as it is not required that the targets come from one specific group. Random but frequent murder by the government would constitute governmental killings under CIRI but not in Harff's data. I dichotomize the original three-categorical variable such that it takes on a one if the extrajudicial killings were

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6 See also Harff (2003).

7 See `http://globalpolicy.gmu.edu/pitf/pitfcode.htm#40`.

carried out "frequently."

As argued above, the theoretical arguments and expectations for the data extend seamlessly to other means by which governments may remove citizens from political life, which I called removal. CIRI provides two further measures that comport with this notion. First, their variable called "political imprisonment" measures incarceration for critique or protest against the government, preaching, or membership in ethnic or religious groups. Imprisonment removes people from political life, just as killings do, but without people necessarily having to die. Second, "disappearances" are "cases in which people have disappeared, political motivation appears likely, and the victims have not been found." Whereas disappeared people's whereabouts are unknown, "it is typically known by whom they were taken and under what circumstances."[8] As with the extrajudicial killings, I make the original three-categorical variables binary, separating "frequent" disappearances and imprisonments from the rest, respectively.

The treatment of interest is the amount of foreign aid that the recipient country receives. Whereas the raw aid inflow is often the quantity of interest (such as in the preceding two chapters), the theoretical model suggests that aid in relation to

[8] The quotes are from the "Short Variable Descriptions for Indicators in the THE CINGRANELLI-RICHARDS (CIRI) HUMAN RIGHTS DATASET" at `http://www.humanrightsdata.org/documentation/ciri_variables_short_descriptions.pdf`.

the size of the recipient country is crucial. Therefore, I will provide estimates for three separate yet related quantities: raw foreign aid, foreign aid per capita, and foreign aid as a fraction of governmental resources. The data on foreign aid come from Tierney et al. (2011), those on resources and the population from the Penn World Tables (Heston, Summers & Aten 2011) and Gleditsch (2002), respectively.

The goal is to obtain unbiased causal estimates of how aid affects the governmental choice to remove citizens from political life. The perennial issue in obtaining these from observational data is confoundedness; that is, that there factors which affect the treatment assignment as well as the outcome. Following Pearl (2000), it suffices to adjust for these confounding variable to remove bias. By consulting the respective previous literatures on aid allocation and the government's choice of killing, I obtain the following observable confounders, which I will consider in turn.

First, scholars have long noted that there is a *population* bias in donors' aid allocations (Arvin & Drewes 2001). Bueno de Mesquita & Smith (2009*a*) explain this finding by arguing that a greater recipient population makes donors more eager to seek policy concessions which are paid for through aid. At the same time, Besançon (2005), Montalvo & Reynal-Querol (2008), and Easterly, Gatti & Kurlat (2006) provide evidence that governments of more populous countries tend to carry out more killings. The data on the population of recipient country comes from Gleditsch

(2002).

Second, *natural disasters* tend to prompt donors to provide more (emergency) resources to the recipient (Drury, Olson & Van Belle 2005, Strömberg 2007, Raschky & Schwint 2012). At the same time, governments react to disasters with increased violence (Besley & Persson 2011). I operationalize disasters twofold in this chapter. Using the widely used data from the EM-DAT project (CRED 2011), I create a dummy variable that takes on a one if any disaster occurred (ie. at least one person was affected[9]), and another dummy that captures a large disaster (more than 100,000 people were affected). The reason for these codings is that that not only the occurrence of a disaster matters, but also its magnitude (e.g. Keefer, Neumayer & Plümper 2011, Flores & Smith 2012).

Third, recent work on bargaining over aid-for-policy deals focuses on the recipient's *political institutions* as they affect the aid that donors have to pay for policy concessions (Bueno de Mesquita & Smith 2007, 2009). More inclusive regimes are more difficult to be bought off so that they tend to receive less aid. The (increasing) importance of institutions is corroborated by Claessens, Cassimon & Van Campenhout (2009). Institutions also play a crucial role in the scholarship on governmental violence. Rummel (1995) argues and shows that democracies, because they are more

[9] These include people affected by droughts, earthquakes, floods, and and volcano eruptions.

accountable, commit fewer killings; these findings are corroborated by Easterly, Gatti & Kurlat (2006) and Wayman & Tago (2010). Similarly, the formal model by Besley & Persson (2011) shows how more inclusive regimes are less likely to kill their own citizens. Further, Colaresi & Carey (2008) find that the constraints on the executive matter. I use the polity2 measure of Polity IV as an omnibus measure of institutions. It not only captures institutionalist notions of democracy, but also partially reflects the size of the winning coalition by Bueno de Mesquita & Smith, as their measure is constructed (mostl) from Polity.

Fourth, governmental killings are most likely during *civil wars* as argued by Valentino, Huth & Balch-Lindsay (2004). In their view, the killing of civilians is a tool of a government in a civil conflict against a guerrilla insurgencies. The killing of civilians is aimed to undercut insurgents' support base. Corroborating evidence is provided by Krain (1997) and Wayman & Tago (2010). In the aid literature, Brück & Xu (2012) provide evidence that civil wars are associated with aid increases. Data comes from the Correlates of War Project' Intra-State War Data (v 4.0) (Sarkees & Wayman 2010).

Fifth, whereas democratic and more inclusive regimes have been found to be less likely to engage in killings, Esteban, Morelli & Rohner (2010) find that regimes that are *democratizing* become more likely to engage in mass killings. Similarly,

democratizing countries have been found to receive more democracy aid, a particular subset of foreign aid (Nielsen & Nielson 2010, Brück & Xu 2012). I operationalize this phenomenon as a dummy that takes on a one if a country's polity2 score increases by at least three points within a year.

Sixth, formal models of governmental violence by Esteban, Morelli & Rohner (2010) and Besley & Persson (2011) predict that the presence of *natural resources* makes mass killings more likely. The argument is analogous to the argument in this paper why aid should make them more likely. They also supply evidence that this is the case. Empirically, the oil reserves, oil production, and the presence of lootable diamonds have been linked to the onset of mass killings (Querido 2009, Esteban, Morelli & Rohner 2010). I measure natural resources through the extent of oil reserves of the country (British Petroleum 2011).

Seventh and last, both aid and killings are *autoregressive* and are affected by the lag of each other. Harff (2003) and Besley & Persson (2011) show that killings are strongly autoregressive and persistent once started. Past killings also affect donor's aid allocations (Brück & Xu 2012). Flipping things around, past aid strongly affects current aid (Carey 2007) as well as changes to its levels the outbreak of domestic violence (Nielsen, Findley, Davis, Candland & Nielson 2010). Therefore, the lags of the outcome as well as of the aid level are accounted for.

The assembled data has a temporal domain 1982–2004, covering 114 recipient countries. There are a total of 2,231 state-year observations. In total, there are 95 state-years of politicides or genocides; 534 in which the government engaged in "frequent" extrajudicial killing of citizens; 246 cases of "frequent" disappearances; and 831 of "frequent" political imprisonment.

4.3.2 Estimation Approach

The previous theoretical work on foreign aid and governmental killings, including Esteban, Morelli & Rohner (2010) which this chapter mostly relies upon, lets me determine which theoretical variables to consider. However, knowledge of which variables are confounders is insufficient to obtain the desired unbiased estimate of the causal effect. It also necessary to specify correctly their functional forms, including interactions (Signorino & Yilmaz 2003).

Unfortunately, the prior work lacks the specificity to guide researchers which functional forms to use. This is in particular the case in work without formal models. More explicitly in formal models, the strategic interactions between actors (incumbents, supporters, rebels, donors, etc.) imply complicated structural forms for the equilibria for either event. These difficulties are exacerbated by the absence of work that considers aid and killings simultaneously so that the right functional form for

confounders could not be determined (Kenkel & Signorino 2012).

Whereas the ubiquitously used linear and additive estimators have been shown to fare particularly badly when facing these problems (Signorino & Yilmaz 2003, Arena & Joyce 2011), recent work from the machine learning literature offers an escape.[10] In particular Bayesian Additive Regression Trees (BART) have been shown to perform remarkably in capturing functional forms from data (see CGM, Miyamoto, Hazeyama & Kadobayashi (2009), Zhang & Härdle (2010), and Hill (2011)).

BART combines a sum-of-trees approach together with a regularization prior over the trees to average over many weak-learners capturing non-linear relations. The following gives the intuition behind the estimator and explains its advantages. The technical details can be found in the articles by CGM, and in particular in Chipman, George & McCulloch (2010).

Let Y be a $N \times 1$ vector of binary responses that is modeled as a function of a vector of treatments (D) and a matrix of confounders (X). N is the number of observations in the sample. The substantive interest lies in how the treatment affects the outcome. As the response is binary, let

[10] See also Signorino & Kenkel (2011, 2012).

$$Pr\left[Y = 1|D, X\right] = \Phi\left[f(D; X) + \epsilon\right],$$

with $\epsilon \sim N(0, \sigma^2)$. $\Phi(\cdot)$ is the cumulative density function of the standard normal distribution which maps transforms the unbounded output of the function $f(\cdot)$ in the unit interval as required for a probability.

The key component of BART lies in its specification of the function, $f(\cdot)$, that relates the treatment and confounders to the responses. There are two foundational elements to BART, namely a treed regression and the sum-of-trees which are regularized via a prior. I shall introduce the intuition and advantages for either in turn.

A treed regression partitions recursively the entire predictor space into m non-overlapping sets of observations (see Alexander & Grimshaw 1996, Hastie, Tibshirani & Friedman 2009); each observation belongs to only one of the m groups. The means of each group's outcomes are $M = (\mu_1, ..., \mu_m)$. The growing of the tree occurs by generating partitions of the data based on whether the next partition step improves the fit to the data. One treed regression can thus be written as $g(D, X; T, M)$, which is a mapping of the treatment and confounders via a tree-structure into predicted responses (M).

It is easy to see how this naturally allows for (complex) non-linearities and interactions. However, single tree regressions face issues of overfitting. After all, in the extreme, the partition's mean vector could be identical to the actually observed values. This would lead very poor fits for out-of-sample predictions. BART deals with the issues by growing numerous trees. The idea is that each tree may capture some, even idiosyncratic functional form in the data for some sample, but the contribution of each to overall prediction is low. The more such weak learner trees point toward the same functional relationship, the more it will come to be reflected in the prediction. Typically, one allows for $J = 200$ trees to be grown which are subsequently averaged over.[11] The function $f(D; X)$ has therewith a sum-of-trees specification:

$$f(D; X) = \sum_{j=1}^{J} g(D, X; T_j, M_j).$$

Numerous comparative evaluations point to BART's remarkable ability to detect patterns in data (see again CGM, Miyamoto, Hazeyama & Kadobayashi (2009), Zhang & Härdle (2010), and Hill (2011)). To the extent that the set of covariates used to model the response contains crucial information but lacks the interactions and

[11] Importantly, the growth and proliferation of trees is kept in checked by a regularization prior. For the details about estimation and regularization, see the articles by CGM.

transformations, BART produces substantially more accurate estimates than vanilla regressions. Further, as BART is a Bayesian approach, its estimation via Markov Chain Monte Carlo methods produces a posterior distribution and thus accounts naturally for the statistical uncertainty in estimations.

The parameters and grown trees from BART models are difficult to interpret. For each iteration of the sampling, there are (likely) many terminal nodes for each of the usually 200 trees. Aside from the large number of parameters, the trees themselves are not unique identified. This makes for fast mixing and exploration of the posterior space but renders direct interpretation essentially impossible. BART's power to estimate comes at the cost of lacking easily interpretable parameters that relate predictors to outcomes, such as a regression coefficient, for example.

Users of BART thus rely on predictions. Hill (2011) makes the case to use output from BART to calculate the treatment effects of interest. This chapter does the same. Let τ_l and τ_h be two levels of foreign aid to calculate the first difference in order to obtain the treatment effect. Relatedly, let $N_{D>\tau_h}$ and $N_{D<\tau_l}$ be the sets of observations which received more than τ_h and less than τ_l in foreign aid, respectively. Specifically, this gives rise to the following three estimands that are familiar from the causal inference literature.

$$SATE = \frac{1}{n}\sum_{i} \Phi\left[f(D = \tau_h, X_i)\right] - \Phi\left[f(D = \tau_l; X_i)\right]$$

$$SATT = \frac{1}{|N_{D>\tau_h}|}\sum_{i \in N_{D>\tau_h}} \Phi\left[f(D = \tau_h, X_i)\right] - \Phi\left[f(D = \tau_l; X_i)\right]$$

$$SATC = \frac{1}{|N_{D<\tau_l}|}\sum_{i \in N_{D<\tau_l}} \Phi\left[f(D = \tau_h, X_i)\right] - \Phi\left[f(D = \tau_l; X_i)\right]$$

The sample-average treatment effect (SATE) provides an estimate of how changing the level of aid from τ_l to τ_h affects the probability of the outcome (killings, disappearances, imprisonments) for a random observation in the data. The sample-avarage treatment effect for the treated (SATT) and for the controls (SATC) do the same except for a random observation which in reality received more than τ_h and less than τ_l in aid, respectively. It turns out, as will be shown below, that these distinctions matter little.

The arguments by Besley & Persson (2011), Conrad & DeMeritt (2013), and Robinson & Torvik (2011) suggest that the effects of unearned revenue (ie. foreign aid in this chapter) are conditioned by regime type. As BART naturally produces such estimates as well, I also provide corresponding conditional average treatments effects, CATE, CATT, and CATC. Specifically, I average the simulated effects over the observations for each level of the polity2 scores.

Last, we need to set the values for τ to calculate the treatment effects. Throughout, I will compare increasing each of the three variants of aid from (roughly) the 20^{th} percentile to the 80^{th}. Table 4.1 depicts the corresponding levels of each.

Aid measure	τ_l	τ_h
Foreign aid	150	900
Foreign aid per capita	25	85
Foreign aid over Resources	82	490

Table 4.1 : **Levels Aid for Treatment.** Values for foreign aid to calculate SATE, SATT, SATC, and the corresponding conditional effects.

With variables, models, estimands, and simulation setting specified, we can turn to the next section to study the results. There are a total of four outcomes and three variants of the treatment. BART was run for each of these 12 model specifications, calculating the three estimands for each. Each model was run for a burnin period of 2,000 iterations after which the next 5,000 were saved. All subsequent analysis are based on these latter.[12]

[12] Convergence was assessed using running-mean plots for a random half of the in-sample predictions which are shown in the appendix to this chapter (Figure 4.6). Since the variance of the error term is fixed at one, there is no parameter in BART which is by itself identified (see CGM). Therefore, convergence diagnostics cannot be applied to the parameters. However, we can judge whether the estimated output shows signs of non-convergence.

4.4 Results

This section presents the estimates for the various treatment effects just defined. I will first examine the treatment effects across the sample, then those conditional on the level of the polity2 score.

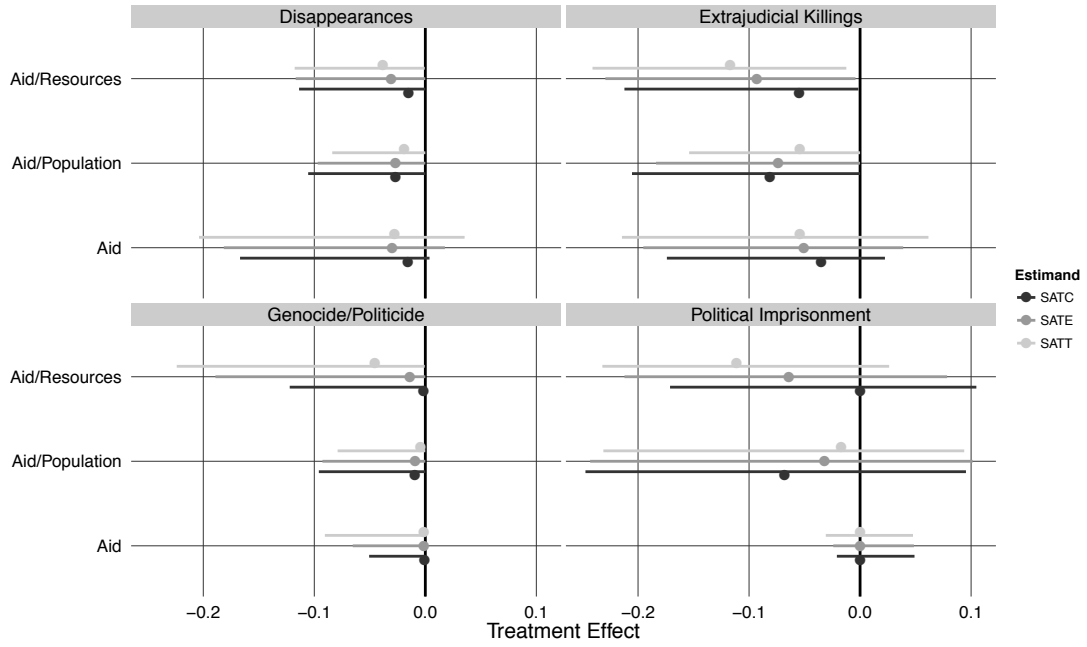

Figure 4.1 : **Sample Treatment Effects for Foreign Aid on Removal Policies.** Each panel shows the estimated treatment effect (on the abscissa) for a different operationalization of aid (ordinate). Each panel refers to one policy. The dot denotes the median estimate, the line horizontal line the 90% central credible interval. The different colors indicate the different estimands.

Figure 4.1 shows the results for the sample-based effect estimates, with each

panel belonging to one of the dependent variables. Along the abscissa, the treatment effect is shown whereas the ordinate labels the operationalization of foreign aid. Each line represents the 90% central credible interval of the posterior distribution of the estimate; the dot denotes the median. The vertically stacked lines refer to the different estimands as color-coded in the legend to the right.

Consider first the panel for "Genocide/Politicide" for the dependent variable from (Harff 2008). The densities of the treatment effects lie almost entirely on the negative side regardless of the estimand or the operationalization of foreign aid. However, the median estimates mostly cling to zero, indicating that raising aid regardless of its exact measure fails to affect the recipient country's to engage in genocidal or politicidal actions. The one exception is that the SATT estimate when for aid as a fraction of resources is small, but consistently negative. That is, for cases that received much aid, aid leads to a slight reduction in the probability of engaging in genocide or politicide.

The negative treatment effects are more pronounced for the extrajudicial killings. The posterior densities lie essentially entirely on the negative side (except for the aid volume operationalization) Further, the median estimates are between -.05 to -.10 percentage-points and thus indicative of substantial reductions in the odds of a country of a country carrying out frequent extrajudicial killings.

Turning now to the not necessarily lethal forms of removal, we see that the treatment effects are qualitatively similar. Disappearances by the government exhibit similar treatment effects as the genocide/politicide. The posterior density is essentially entirely on the negative side, and the median estimates are small. Last, in contrast to the previous three, the estimates are considerably more noisy so that a clear direction of the estimates are not revealed.

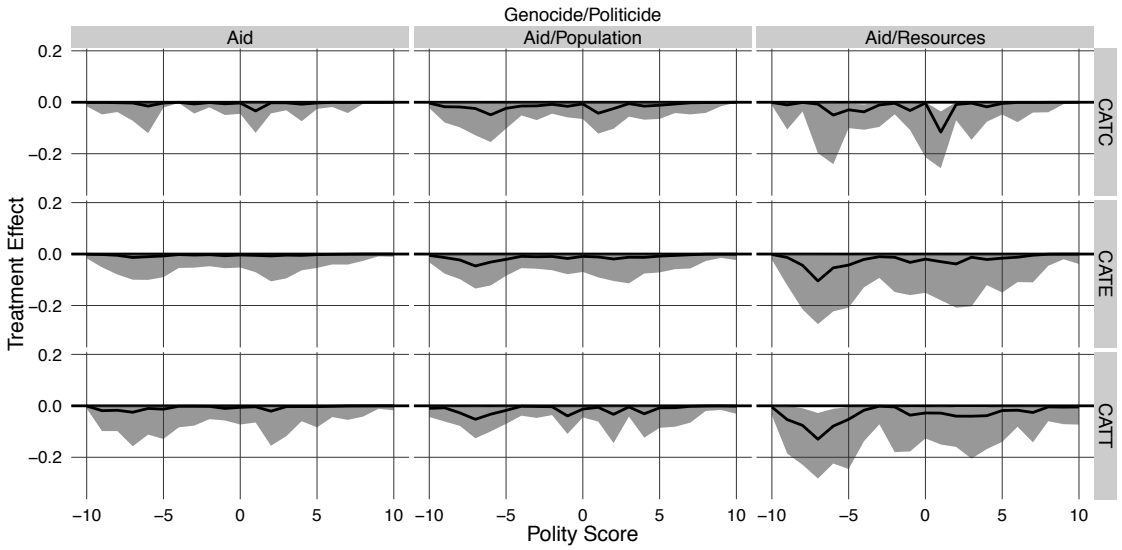

Figure 4.2 : **Conditional Treatment Effects for Genocide/Politicide.** Each column of panels denotes the treatment effects for one operationalization of aid, whereas each row pertains to a specific estimand. Each panel shows the polity2 score on the abscissa and the treatment effect on the ordinate. The thicker line gives the median causal estimate, whereas the semitransparent polygon the 90% central credible interval. The horizontal black line denotes no-effect.

Turning now to the conditional treatments, Figures 4.2 through 4.5 show the

resulting summaries of the posterior densities. Each figure is a 3×3 grid with columns corresponding to the different operationalizations of the aid-treatments and rows to the separate estimands. Each panel graphs the level of the polity2 measure on the abscissa and the treatment effect on the ordinate. The light gray polygon shows the 90% central credible interval, and the black line the median estimate.

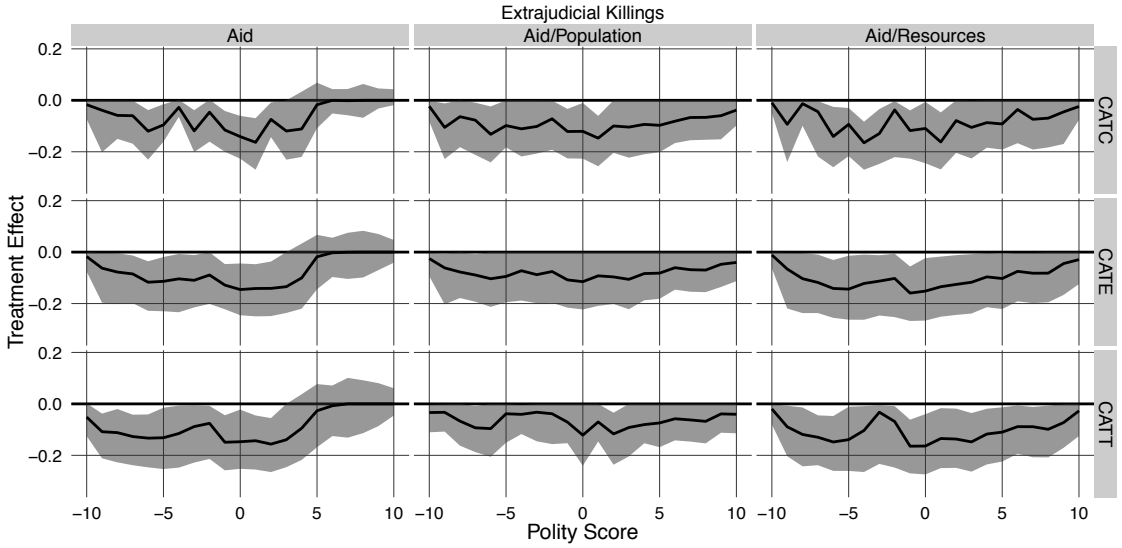

Figure 4.3 : **Conditional Treatment Effects for Extrajudicial Killings.** See the caption to Figure 4.2 for more details.

The figures reveal that the results from the unconditional estimates broadly hold even when conditioned on the polity2 score. The estimates for the effect of aid on political imprisonment is noisy around zero (Figure 4.5), extrajudicial killings are consistently estimated to see reduction from an increase in aid (Figure 4.3), and

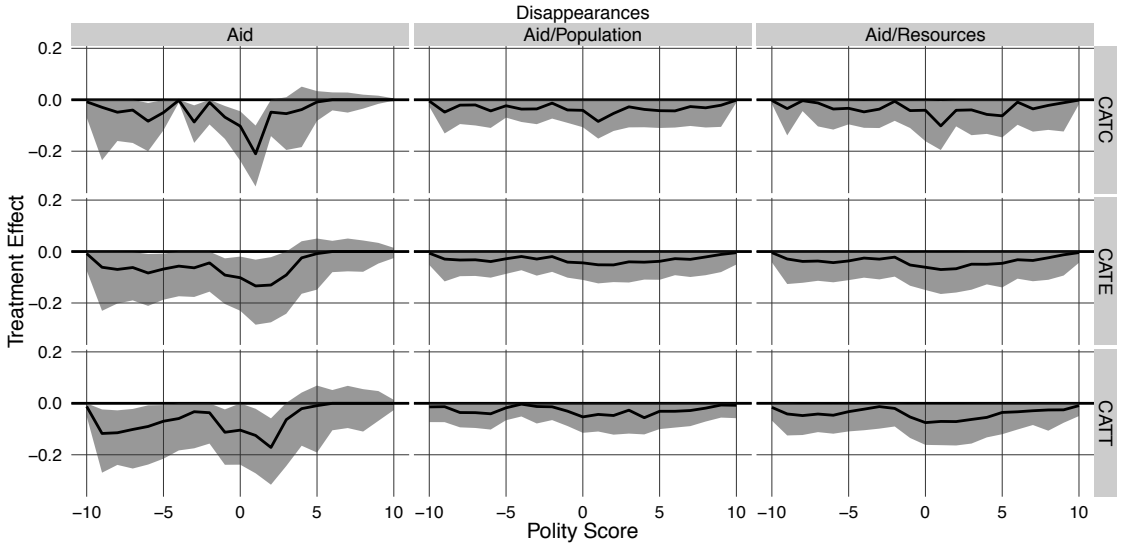

Figure 4.4 : **Conditional Treatment Effects for Disapearances.** See the caption to Figure 4.2 for more details.

disappearances as well as genocides/politicides are slightly reduced (Figures 4.4 and 4.2). A few differences are worth emphasizing specifically.

4.5 Conclusion

The causal estimates of the effect of a big increase in foreign aid, either in its value, as a share of the governmental resources, or per capita, leads unexpectedly to a reduction in the recipient government's efforts to remove citizens from political life. Where does this leave the literature on foreign aid and its effects political violence specifically and the broader literature on unearned resources and violence?

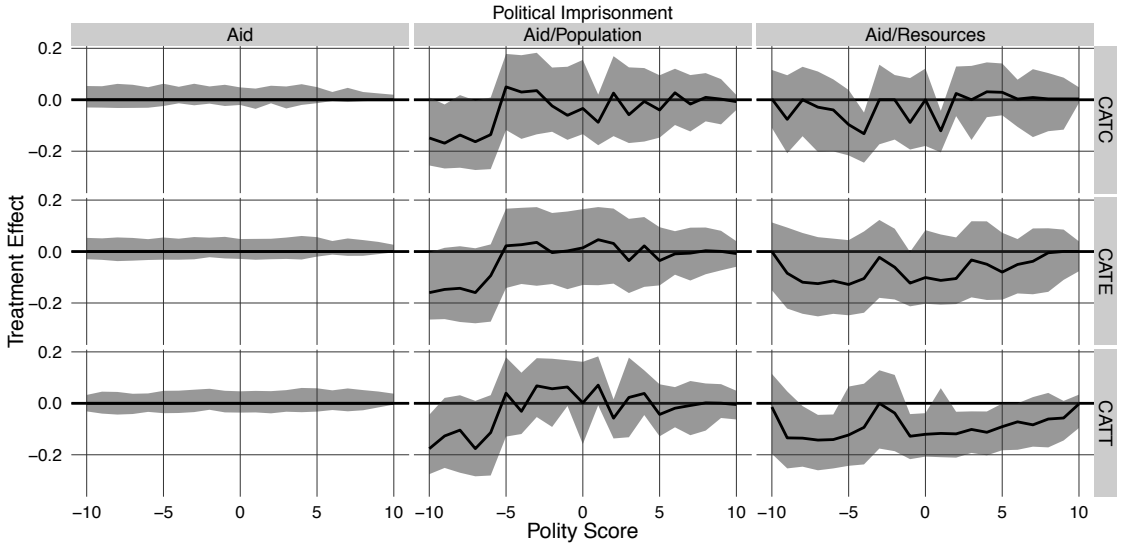

Figure 4.5 : **Conditional Treatment Effects for Political Imprisonment.** See the caption to Figure 4.2 for more details.

Building mainly on the work by Besley & Persson (2011) and Esteban, Morelli & Rohner (2010), this chapter corroborates the empirical findings by Carnegie, Aronow & Marinov (2012). These authors exploit a natural experiment to estimate the treatment effect of foreign aid by the European Union. Castigating instrumental variables as often lacking credibility, they propose considering the rotation mechanism of the presidency of the European Council. They show that the EU member which holds the president can largely set the agenda; if that country happens to be a former colonial master, aid to former colonies increases substantively. They find that such EU aid significantly, but only in the short run, increases the recipient's score on

democracy and governance. They measure the latter using the (aggregated) CIRI scores.

Whereas this chapter unexpectedly finds a negative effect of aid on governmental violence and Carnegie, Aronow & Marinov (2012) find the same without deeper theoretical arguments, others have presented the positive relationship that this chapter expected. Besley & Persson (2011) use membership on the UN Security Council as an instrument for aid increase with which they are trying to capture hikes in unearned revenue. However, this inferential approach has come under critique. Just as Besley & Persson (2011), Bueno de Mesquita & Smith (2010*b*) assume that members of the UN Security Council receive more aid from donors and then find that non-permanent UNSC members increase repression (Besley & Persson 2011) and experience less press freedom, less economic growth, and lower democracy scores (Bueno de Mesquita & Smith 2010*b*). Bashir & Lim (2012) question the workings of the instruments as rotating UNSC members may on average receive more aid, but not all do; yet, there were pernicious consequences of UNSC memberships for those without the aid-increase as well. This critique echoes what led Carnegie, Aronow & Marinov (2012) to leverage a natural experiment to circumvent issues with instruments.

What can we make of these discrepancies between theoretical arguments and

findings? Clues may be had by zooming out and considering what the larger literature on foreign aid and the outbreak of violence suggests. Savun & Tirone (2012) argue that foreign aid acts as insurance against negative economic shocks, which dampens commitment problems. Relatedly, Nielsen et al. (2010) show that shocks in aid may generate precisely such commitment problems. However, such commitment problems do not feature in the models by Besley & Persson (2011) and Esteban, Morelli & Rohner (2010). Therefore, more theorizing about the connection between the nature of resources and violence seems to be necessary.

4.6 Appendix

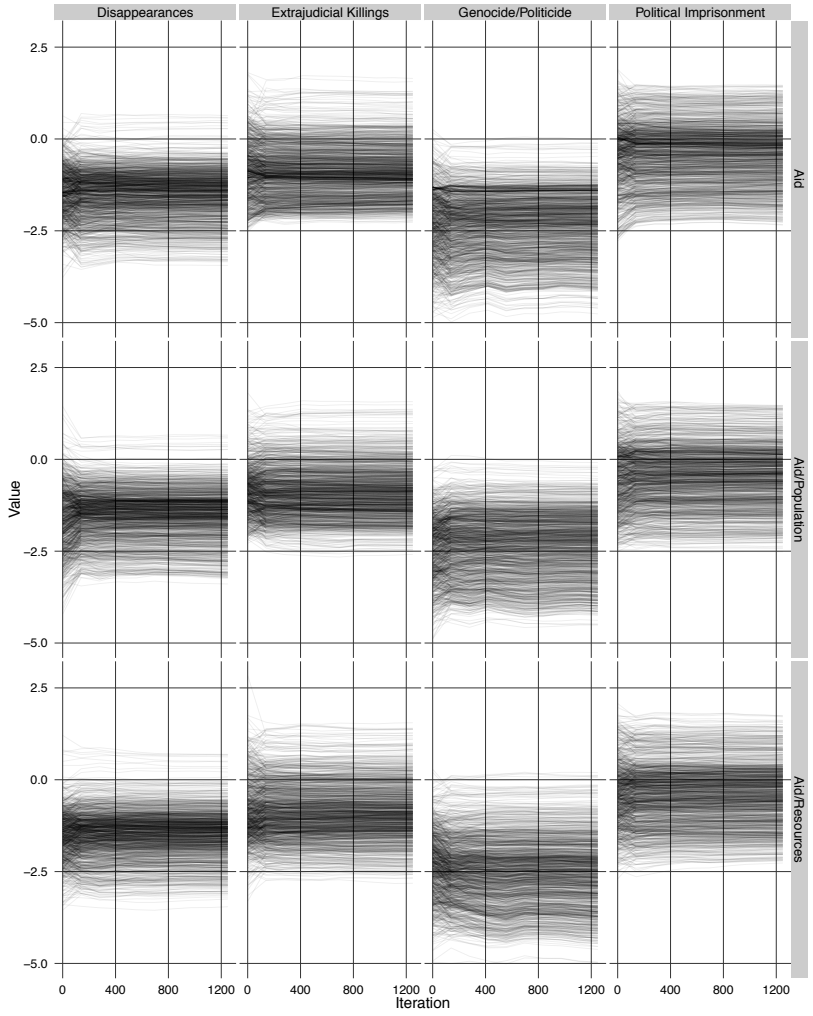

Figure 4.6 : **Running Mean Plot for random Sample of In-sample Predictions.** Each panel shows the running mean of simulated in-sample predictions for random half of the observations. The abscissa gives the iteration, the ordinate the value. Each row of panels belongs to one operationalization of aid, each column pertains to one of the dependent variables.

Chapter 5

Conclusion

This dissertation adds to the growing literature that supports the notion that aid is a political phenomenon through and through, and that to understand it, scholars need to treat it as such. The idea that presumably good things follow immediately from presumably good intentions is belied not only by this dissertation, but by a host of research before it. However, unlike some previous work, trying good intentions as mere cheap talk is mistaken as well. The genuine empathy for human misery elsewhere may have its effects, but the ramifications are bound to look differently from what the proponents thereof may envision.

Chapters 2 and 3 highlight in particular this aspect. Each chapter focuses on how different interests in foreign aid–the *selfish* and the *selfless*–affect the aid we observe. The main implications for future research come from the idea that the interplay between *selfish* and *selfless* interests drive foreign aid as developed most thoroughly in Chapter 2. Whereas a coherent fusion of these two age-old views on foreign aid is a novelty in this literature and should lead to a slew of new research as I will outline shortly, there exists a conceptual predecessor in the literature on the economics

of regulation which is worth considering. Yandle (1983, 2007) developed the so-called baptists-and-bootleggers corollary to the classic theory of regulatory capture. He argues that governmental regulations are not only influenced or even sought by particular companies that would be subject to the eventual regulation, but that there are also those who provide rhetorical, moral cover for the regulation. Harkening back to the era of prohibition in the United States, Yandle points out that there are always two groups that take an interest in governmental regulation, the *baptists* and the *bootleggers*. The *baptists* make an emotional and moral appeal that the regulation is the "right thing to do," whereas the *bootleggers* may not speak up, but stand to gain from the regulation. The real-life baptists condemned drinking for allegedly corrupting the moral bases of society, whereas the real-life bootleggers profited from prohibition as the price for their goods rose (Yandle 2007). The bootleggers gained from the presence of baptists in that the baptists would fight calls for an end of prohibition. Any opponent to prohibition would have to overcome the normatively charged opposition of the baptists, which secured the bootleggers' rents.

The most exciting new research that this dissertation enables lies in considering the complementary, perhaps even collusive, societal forces behind foreign aid and how those may affect the working of foreign aid. Whereas the dissertation left the *selfish* and *bootleggers*' and *selfless* and *baptists*' interests very general, further gains

are to be had by considering in more details the actors and preferences of the various *baptists* and *bootleggers* in the development world.

With this angle in mind, let me sketch some of the possible venues for future research, which lead to shining light on phenomena that have received little interest and revisions of previous stances.

- Recent research has examined how features of aid beyond its monetary volume alter the effects that aid has (e.g. Nielsen et al. 2010, Girod 2012, Heinrich & Kobayashi 2013*a*). If the features matter for effects and outcomes, then a better understanding of what gives rise to these features should be important. It should be a promising endeavor to study aid agreements as being designed by governments (Koremenos, Lipson & Snidal 2001). Similar efforts to understand the deliberate crafting of detailed features of other policies are appearing not only in foreign aid (Winters 2010, Dietrich 2012, Winters & Martinez 2012, Schneider & Tobin 2013, Heinrich & Kobayashi 2013*b*), but also in the research on bilateral investments treaties (Allee & Peinhardt 2010) and on military alliances (Mattes 2012*a,b*). Chapter 3 of this dissertation offers one example for how these heterogeneous motives for foreign aid can generate changes in features of aid. Other aspects, such as channels of delivery, conditions, the number and sizes of projects, among others, seem ripe for an analysis from this

angle.

- It has long been an idea in the aid literature that robust public support for foreign aid program are necessary for a donor to provide aid to a meaningful degree (e.g. Lancaster 2007). However, two questions immediately arise when we apply the *baptist/bootlegger* and *selfish/selfless* lens to this claim. First, if aid just serves to buy policy concessions, Chapter 2 suggests that public support may be irrelevant for the level of aid. The claim about the necessity of public support should therefore not hold in these cases. Second, is more public support strictly "better" from the point of view of these pushing for greater support? The answer, suggested at the end of Chapter 2, is that this need not be the case. Greater public support may increase the marginal benefits of aid to the decision-maker so that it becomes worthwhile buying a policy concessions, which, by results from Bearce & Tirone (2010) and Girod (2012), undermine the sought-after effects. Scholarship should try to determine how such effects could be mitigated or how proponents of development may counteract them. This quick discussion shows that there is plenty of room for a (re)examination of the interplay between public opinion and foreign aid from the point of view of political economy.

- The *baptist/bootlegger* and *selfish/selfless* lens also leads to a study of aid

and development rhetoric as a deliberate choice. There is scant prior work thus far. Easterly (2010) examines the language used by aid practitioners, showing how it systematically lacks notions of accountability.[1] van der Veen (2011) conceives of governments as "frame entrepreneurs" that tweak the public perception on foreign aid. This idea could be taken further by considering how donors manage rhetoric over each recipient country. This dissertation would suggest that aid-for-policy deals, as they are generally less appreciated by the public, should entail rhetorical obfuscation, silence, or distraction, whereas aid given to countries that suffer natural disasters should be extensively extolled. It seems that this research angle is ripe for much further work, in particular with the increasing popularity of treating text as data (Monroe & Schrodt 2008).

Foreign aid is a policy with much at stake for those at the receiving end and, essentially, little for those authorizing and paying for it. As entrenched as foreign aid is nowadays, it should be an imperative to develop a better handle on the intended and unintended as well as on the desirable and undesirable workings of foreign aid. Only with such knowledge could aid be tweaked to better serve those from whom it is ostensibly intended. I hope the reader of this dissertation walks away believing

[1] See also the AidSpeak Dictionary that Easterly compiled from Tweets; see `http://williameasterly.org/the-aidspeak-dictionary/` [accessed March 20, 2013].

that the previous pages contributed a bit to an improved understanding.

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